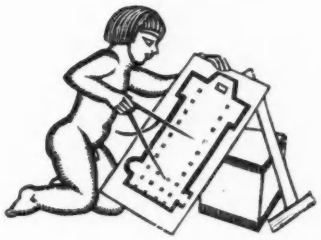
THE ARCHITECTS' JOURNAL



WEDNESDAY, JULY 1, 1931

NOT THE LAST OF THE HUMANISTS

SIR EDWIN LUTYENS very rarely discloses in the written word his opinions upon the changes which are apparent in the newly emerging forms of architecture; they have been offered to the world at large only through the medium of his completed works. This should be enough, and no one who has seen his work either here or in India can be in any manner of doubt as to his attitude. But he has delivered himself of his opinions in an article in *Country Life* that may be discussed with profit.

Sir Edwin is a traditionalist in the best sense. Which is to say that he receives his stimulus for design and for construction from materials that have been tested by time and used in a manner to which long habit has brought familiarity. The story of his training and practice bears witness to his deep knowledge of traditional building, which knowledge has given him a language that has rarely failed to express his wit and genius.

His case against modern architecture, put into a nutshell, is that it is unfriendly, has no wit or humour, and though it may be vital, is without the grammar of style, is unco-ordinated, crude. Some further extension of his criticism involving the use of such words as "electric drills," "combustion engines" and the "proletariat" he would be obliged to omit from a description of what is best in modern architecture.

If we are to compare Sir Edwin's own work with modern architecture, then it is of the best work we must speak, and here it must be said that only too little of what has been produced in England can hope to illustrate the direction in which modern architecture is tending. For that we must go to Germany, Sweden and France, where we will find work in which the materials of today have been used logically, and with a loving sense of their fitness for their purpose, to make buildings of an excellence and in the end a humanity not less eloquent than those that are the products of Sir Edwin's generation.

It is natural to imagine ourselves the last of the humanists, for have we not lived? And are we not living? And what are humanists but artists; men of sensibility and culture? These are not dying from the earth.

Some of the more flamboyantly modern buildings which Sir Edwin Lutyens uses to mark his thrusts have served to obscure the steady re-analysis of architectural form made under the stress of conditions that must inevitably sever us from much that we have loved in the past. The scientific study of materials, mechanics, such subjects as acoustics, illumination and so on, have not utterly destroyed the past: though many think it and talkers say it at every meeting. It is rather that we have been given access to new knowledge that enables us to see truths which, once knowing, we must express. It is not easy. Modern architecture is, indeed, without a highly inflected style. Its grammar is as yet simple. All this makes it difficult of access, for the reason that much logic and reason must precede design.

For the same reason it produces at its best a purer and a more concentrated expression, from which there is no cause to exclude either wit or humour, those rare guests.

If we but take a modern theatre or concert-room, built in the knowledge of acoustics, lighting, and new possibilities of construction, it is impossible to imagine that we may fall back with any hope of salvation upon the traditional forms or manner of building from which Sir Edwin has derived his strength. We must inevitably think of new problems, and they will as surely be solved by new and as yet unfamiliar forms. These forms will become familiar with use, and we shall use them with greater freedom and sureness. But before that time has been felt to arrive we shall have created style. We will no longer be the so-much-abused *modernists* with whom the "humanities" have died.

A SHRINE OF LEARNING

A photographic study of the central block of Tuke building, from the quadrangle, Bedford College for Women, University of London, Regent's Park, N.W., opened on Wednesday last, June 24, by H.M. The Queen. The new building, designed by Maxwell Ayrton, completes the College and is an addition to the work of Basil Champneys. Among the more important features of the addition are the assembly hall, lecture room, observatory, and inorganic and physical chemistry laboratories. Accommodation is provided for the following departments: academic, social studies and economics, psychology, geography, inorganic and physical chemistry and physics. Further views appear on pages 7 to 10.

NEWS & TOPICS

THE SPIRIT OF DUBLIN

THE President of the R.I.B.A. advised well when he told Dublin architects to seek their inspiration at home, for Dublin is full of good stuff. Its heyday, when Gandon built largely, produced a mass of domestic architecture of an extraordinarily high level. Much of this has now degenerated into the slums that provided a setting for Sean O'Casey, but some remains upheld in good estate. And the spirit of that building Dublin might very well revive in this day of Irish regeneration. Georgian Dublin could not have been built without the co-operation of the Wide-street Commissioners. Appointed by Parliament, they were the first scientific town-planners, laying out spacious streets, squares and open spaces upon which rose the splendid public buildings and grand town mansions of the Irish aristocracy.

THE FOUNDLING SITE APPEAL

The Foundling Site Appeal Committee are very wise in making a more determined effort to save a part of the Foundling site when it appears to be impossible to save all. If we can retain enough to make one open space of eleven acres by joining up to the gardens of the adjoining squares, the major object will have been achieved and the integrity of the seventeenth-century plan preserved intact. The price of £320,000 asked for the portion seems to me to be high, considering that the site has proved to be in other respects a white elephant, and I very much hope that negotiations will be less a matter of idealists *versus* business nuts, and just a trifle more matter of fact. It seems likely that the Boroughs of Finsbury and Holborn will come into it generously with the L.C.C. behind them, especially as the King and Queen have shown their approval by a donation of £150 towards the funds for acquisition and sums of £1,000 and £2,000 have also been anonymously subscribed.

THE LINEAR CITY

While Dr. Raymond Unwin devises means of checking ribbon development, I see that his schemes of local traffic roads are quoted in a Spanish pamphlet as having been lifted from a plan of town building called "the Linear City." The Linear City is a sort of super arterial road: the main artery: the only artery. It may stretch from Madrid to Barcelona, from there to Marseilles, and on to Moscow, for all there is to stop it. I cannot say what particular virtues are claimed for the Linear City, because my Spanish is faulty, and for no other reason. I am sure its supporters claim virtues in plenty. One thing I marked in reading the pamphlet, and that was a little picture of a tram-car, which I saw was to run down the eternal axis of the Linear City. It was then I noticed that the development company also owned the trams. I thought that last fact placed the idea within the comprehension of the ordinary man.

THE LAND TAX

Mr. Snowden made quick work of the Town Planning Institute delegation that waited on him recently, but I still cannot see how the tax can be justified on principle. It has been made more palatable by all sorts of exceptions, many of which may please the town planner where before he was frightened; but in whatever manner its rigours are tempered it still remains an additional tax upon a type of thrift common to very estimable classes of the community, and—it may be only the thin edge of the wedge. This tax represents a call for cash by a Government badly in need of it, for one may remember how much stress was laid on the point of its eliminating ribbon development and so on, which was so much red-herring when the land question is looked at broadly. The only justifiable tax on land values in this highly-taxed country would be a tax on values increased by town-planning or other agency and collected for redistribution on an equitable basis.

THE N.L.P. AT HOME

The thousand or more guests of the National Physical Laboratory were received on Tuesday of last week by Sir Gowland Hopkins, President of the Royal Society, Sir Richard Glazebrook, and the Director, in the lofty high-tension building, against a background of fearsome high-tension coils, capable of delivering 1,200,000 volts. Inactive they were sufficiently awesome, but I found it almost terrifying when the current was led out to a standard in the open and flashed across about three feet of insulators—artificial lightning in fact. Such things as this and the Froude Laboratory, containing the 550 ft. Yarrow water tank, wherein scale models of ships' hulls in wax are towed, and data of their resistance, etc., are obtained, are bound to be matters of common interest. But there were also exhibits with a direct bearing on the pursuit of architecture. In the new physics building—a straightforward affair of brick, which had been opened that morning—there was some interesting apparatus adapted for measuring noise—the aeroplane is apparently still the loudest mechanism invented by man—and means of measuring the amount of water vapour in fogs was also exhibited.

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But probably the records of air pressure on a house in varying wind conditions were of the greatest practical interest. At Manchester there is an actual house from which one set of figures was obtained. At Teddington a very small-scale model of the building was prepared and subjected to winds in one of the several wind tunnels which are available for all kinds of wind-pressure experiments. It was interesting to note the slight variations between the two sets of curves thus obtained. The mass of work carried out at the laboratory may be judged by the fact that a staff of 700 persons is employed; and the work has saved its cost over and over again in manufacturing industries.

REASONS FOR THE DECAY OF CRAFTSMANSHIP

I wonder whether any of those who lament the decay of craftsmanship and who contrast the modern workman's methods with those of his predecessors, have ever considered where it is that the modern gets his standards? Probably most of us would answer such a question by saying that the young tradesmen follow the example set by older men and dictated by their employers, the builders. That would be true but, also, it would be inadequate. There are three other educative [*sic*] influences—(1) the technical schools, where young men are taught by a half-baked

instructor, known as "a practical man," whose methods result in structures which stand up but which are lacking in every refinement of design or trace of good craftsmanship; then there is (2) the cheap handbook, often written by the chief of a technical school, who suffers from all the drawbacks of never having had proper architectural training or experience of good building, and to whom the "practical men" and their ways seem entirely satisfactory; last (3) there is the cheap trade journal, made up of snippets, of articles written by incompetent persons who paraphrase or perpetrate travesties of standard works, and of plans and drawings of "neat" bungalows and villas, which incorporate the latest stock detail of the builders' merchant. These are all absorbed by the budding tradesman, and their fruit is seen in every tawdry dwelling and showy bungalow. In fact, the stream of knowledge once more is polluted at its source. The remedy? Why, to begin at the other end, by ceasing to build filters down-stream, but by stopping poisoners up above.

"SAFETY ZONES" IN EARTHQUAKE-RIDDEN HOUSES

It has been decided to commence rebuilding operations within the next few months at Napier and Hastings, the two New Zealand cities that were practically ruined by earthquake a few months ago. It is possible (if not probable) that both these cities will again be threatened, and as concerns houses that are to be re-erected, a precaution against injury to the occupants has been suggested by an Australian architect, Mr. Liscombe, now in London. His idea is to construct a small internal section of the building sufficiently strong to withstand the collapse of the main structure around it, and to remain intact itself, thus acting as a "safety zone." He points out that, in many cases, a serious earthquake is preceded a few moments earlier by tremors which do very little harm, other than cause panic—an almost certain result, when the individual imagines himself to be in surroundings which, in a matter of seconds, will inevitably be destroyed, and where any one spot is no safer than any other. But if such a safety zone were near, he would have time to reach it, and the risk of injury would be minimized. It has been said that the majority of casualties are caused by the fall of material, loosened by violent vibration. In the case of a residence, the occupants would come together in the safety zone; which is desirable, because, apart from the giving of mutual assistance, they could later unite their efforts in removing debris to free themselves.

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In a letter, recently sent to the Secretary of the N.Z.I.A. at Wellington, Mr. Liscombe enclosed a small sketch-plan showing suggested construction details. As a typical case, the end of a passage or lobby, about 6 ft. in length, was considered. It was almost a box, with one end and part of a long side (equivalent to the width of the passage) left open. It was of reinforced concrete, enclosing a rectangular frame of light steel members. Openings were omitted in two adjoining walls, and in these, together with the ceiling, were placed diagonal members braced in both directions (each pair being at right angles to the other two, a system possessing the maximum rigidity should the safety zone become dislodged). For footings, a single steel joist was placed at either end, and these extended considerably under the normal floor. The box was to be constructed entirely separately from the main building, with the normal walls abutting upon it. As a precaution against fire, switches controlling the electric supply were to be placed at this point.

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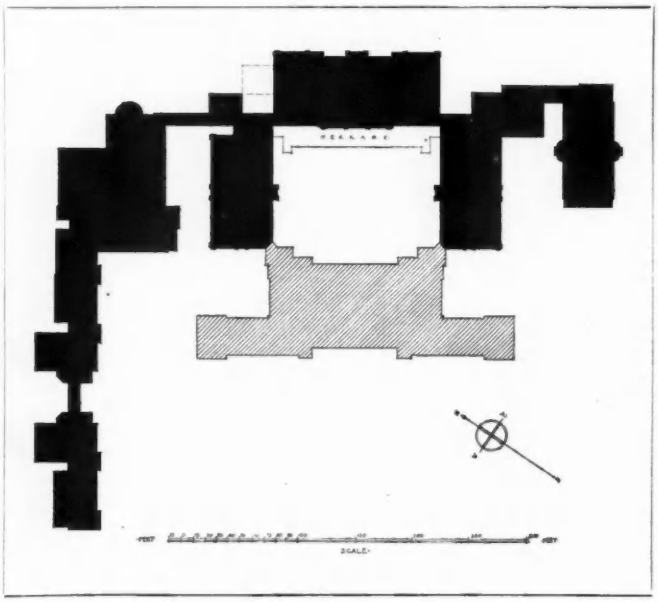
It would be for the architect to place this shelter as centrally and conveniently as possible, and as far away as reasonable planning would allow from chimney stacks or other weighty objects which would fall and damage it, or injure people approaching it. It would be very inconspicuous, as its visible surfaces could be treated similarly to those of the general finish, and it would possess a false wood floor. The position and purpose of such "safety zones" would be defined by some significant sign agreed upon. As regards cost, their erection should not be prohibitive, being only an initial outlay. Actually, it would replace a considerable amount of normal material.

ASTRAGAL



Block plan of Bedford College for Women, Regent's Park, N.W., showing, in hatched lines, the disposition of the new extension, erected from the designs of Maxwell Ayrton, and illustrated on the following four pages. There are now over 600 students at the College, not including those who attend inter-collegiate courses, and over 220 are residents.

TUKE BUILDING

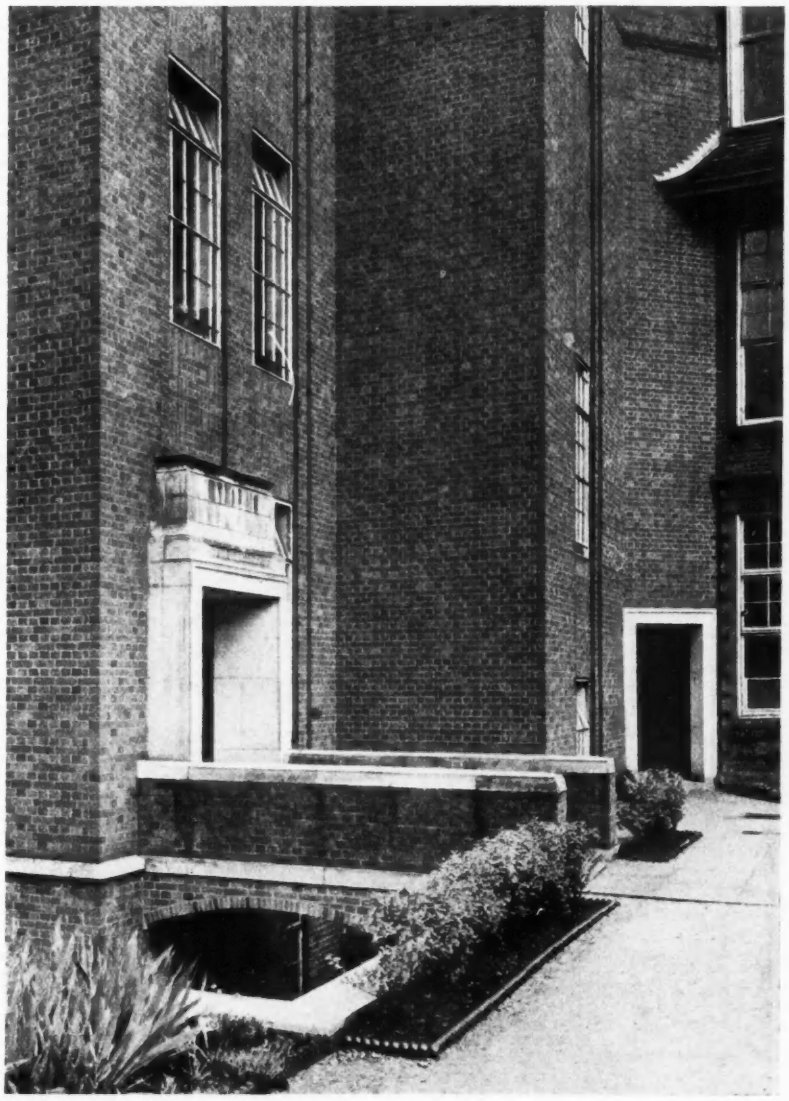
Bedford College for Women

DESIGNED BY MAXWELL AYRTON

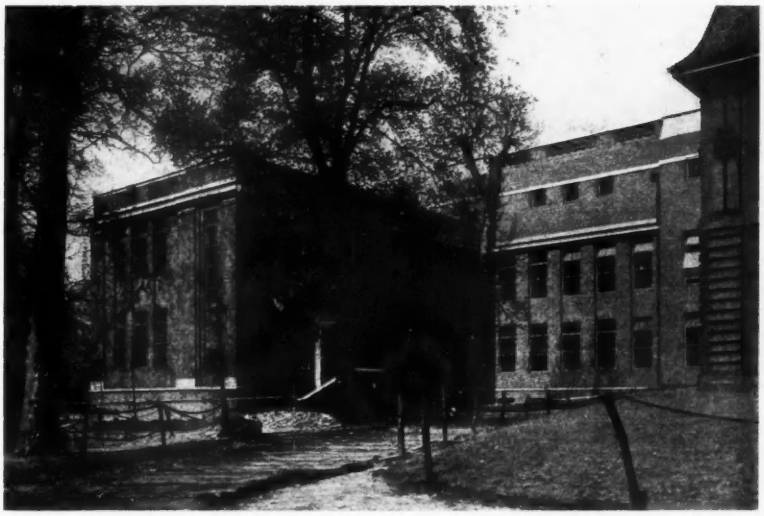
ON Wednesday last, June 24, H.M. the Queen performed the opening ceremony at Tuke Building, Bedford College for Women, University of London, Regent's Park, N.W. Her Majesty was received outside the building by the Most Hon. the Marquess of Crewe, K.G., P.C., G.C.V.O., and by Dr. Scott Lidgett, Vice-Chancellor of the University of London; and inside by Sir Wilmot Herringham, K.C.M.G., C.B., Chairman of the Council of the College and Miss Jebb, Principal of the College. In the reception room Her Majesty was received by Sir Hildred Carlile, BT., C.B.E., President of the Extension Fund, the Lady Cynthia Colville, Chairman of the Extension Fund, the Countess of Iveagh, C.B.E., M.P., Hon. Treasurer of the Extension Fund, and Miss Tuke, Principal of the College from 1907 to 1929, and after whom the new building has been named. Among those who had the honour of being presented to Her Majesty were Mr. Maxwell Ayrton, the architect for the new building, Miss O. Monkhouse, M.B.E., Secretary of the College, and Messrs. B. C. Aldous, of Messrs. F. and H. F. Higgs, the contractors; A. Petty, the clerk of works; B. L. Mitchell, the general foreman; G. Penny, foreman bricklayer; and T. Blake, ganger navvy.

The history of the building of the college is of interest in showing the rapidity of its advancement as an important branch of the University of London. In 1913 the new buildings designed by Mr. Basil Champneys were commenced, at which time it was considered that they would be sufficient to meet all future development, and it was understood that upon their completion South Villa should be demolished. However, the increase in numbers and in the scope of the College rendered this impossible, and later temporary buildings had to be erected in addition to the continued use of South Villa.

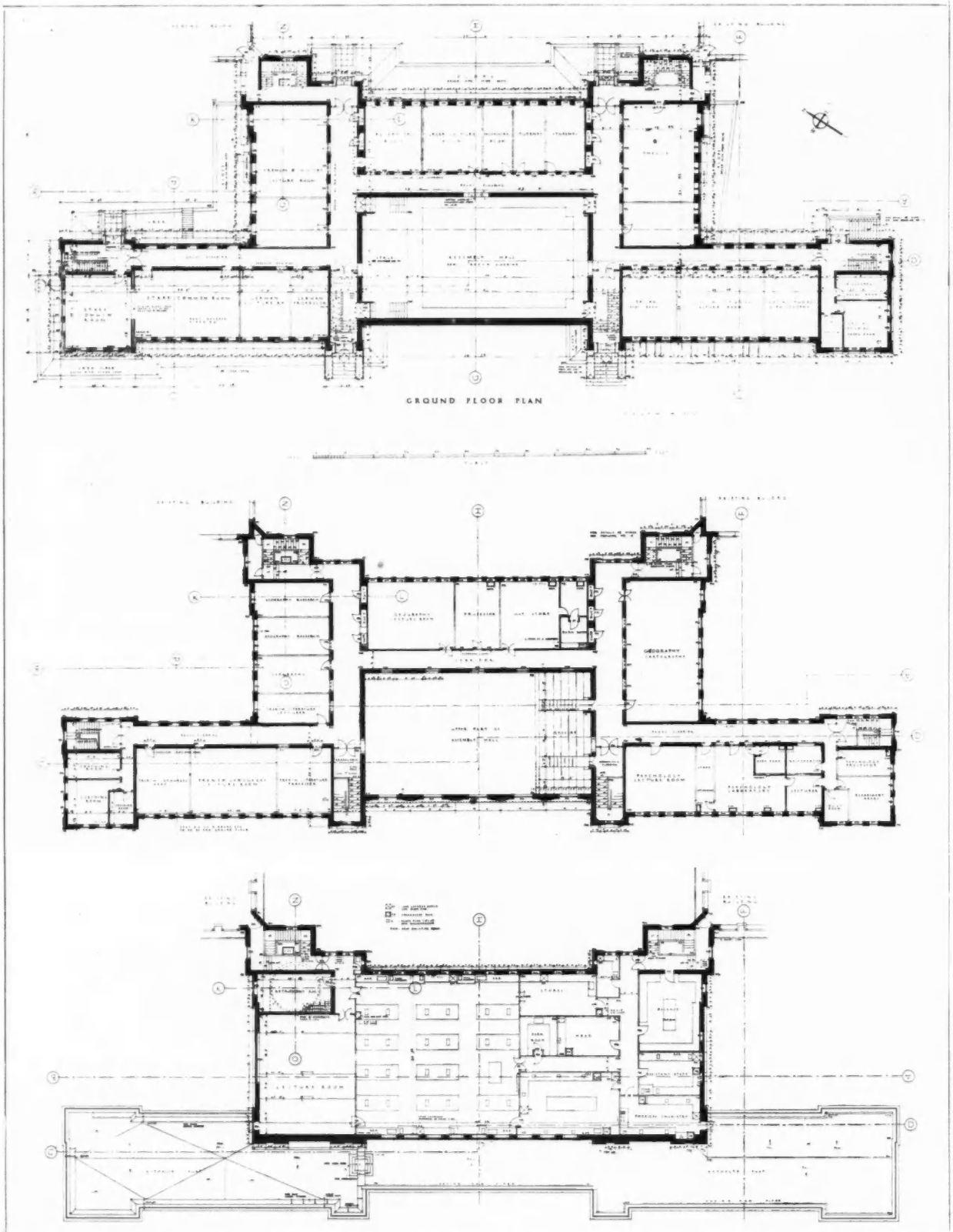
The new Tuke building has now replaced these and the College is complete. The general layout of the plan was naturally largely influenced by the existing buildings, but still more so by the necessary restrictions of the lease under the Crown.



Doorway in the north-west corner of the quadrangle. The smaller splayed door leads to the older building.



South end showing, on the right, the junction with the older building. The whole of the buildings are faced in multi-coloured brick with Portland stone dressings. The college was founded in 1849.

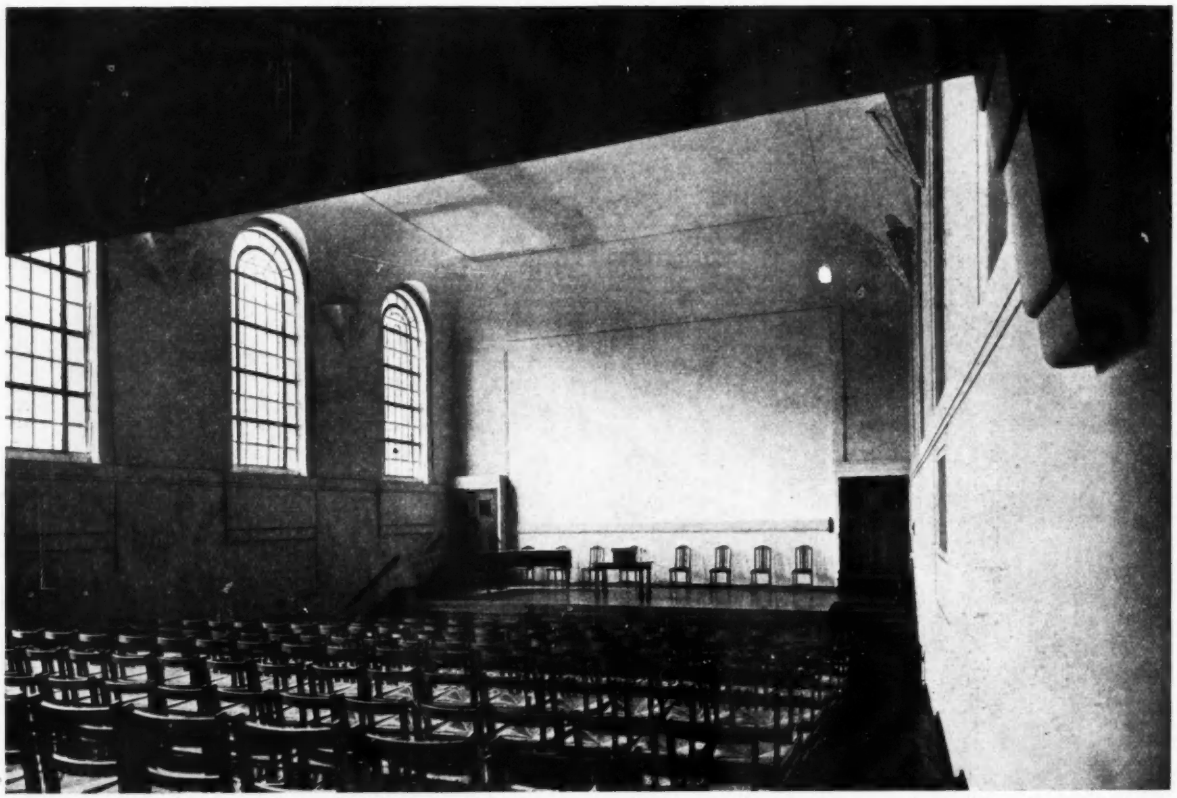


Tuke Building, Bedford College for Women, N.W. [*By Maxwell Ayrton.*

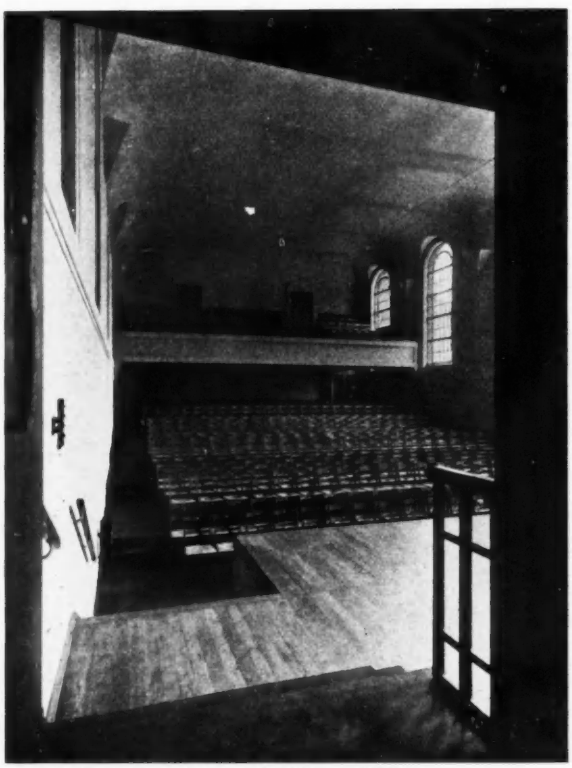
Ground-, first- and second-floor plans. Tuke building can be entered through both wings of the original building at each floor level and also by six external entrances with staircases at each point, two of which serve the second floor.

Tuke Building, Bedford College for Women, N.W.] [*By Maxwell Ayrton.*

The height of the main, south-west, front was restricted, by the terms of the lease, to 38 ft. in the centre and 35 ft. for the wings, which limited these portions to ground and first floors only. To overcome this difficulty a total height of 49 ft. was eventually allowed for the building subject to the third floor being set back some 24 ft. from the main façade.

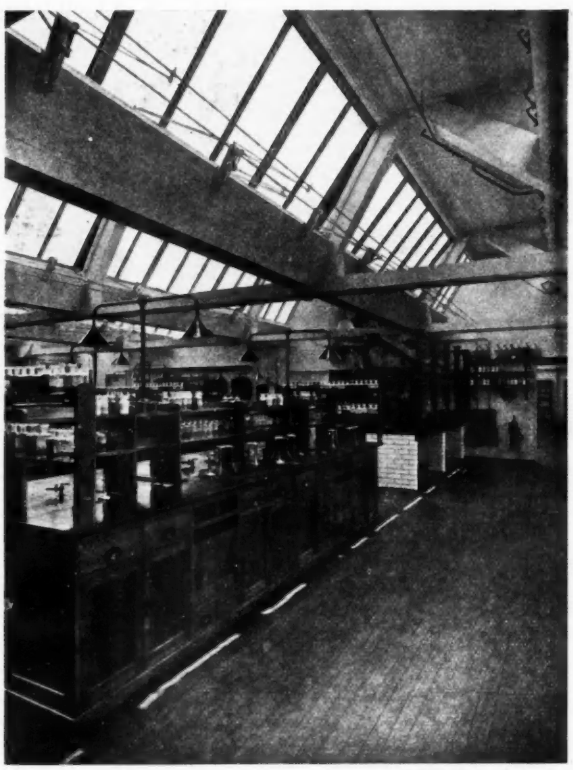


In the assembly hall the stage is fitted with a movable proscenium and with complete arrangements for electric and stage lighting, operated by a switchboard sunk below the stage. The wall is specially prepared as a screen for projection of magic lantern slides.



Tuke Building, Bedford College for Women, N.W.]

The assembly hall, looking towards the gallery. It has seating accommodation for 600 and, with the gallery, extends through two floors, a height of 25 ft.



[*By Maxwell Ayrton.*

The inorganic chemistry laboratory is equipped with electrical heating apparatus, roof and side lighting, and special methods of ventilation to ensure a clean and healthy atmosphere.

"THE SCHOOL IN THE WOOD"

Whaley Thorns, Derbyshire

DESIGNED BY
G. H. WIDDOWS

The south side of the north block, showing the open type of veranda adopted for sunny aspects. At the end is seen the assembly hall building; on the left, the cookery room.

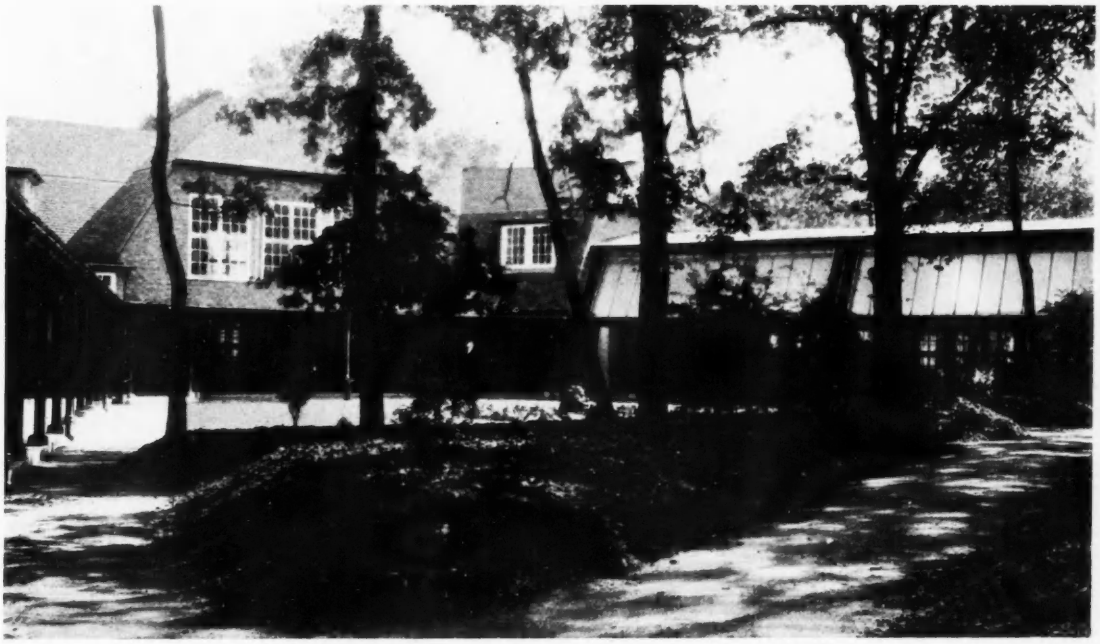
The south end of the assembly hall. As will be seen from the drawing reproduced on the following page, the ground plan is of a splayed type identified with open-air schools.

THE open-air school at Whaley Thorns, Derbyshire, of which photographs and plans are herewith presented, follows the usual type which the architect has evolved, and of which an example—Staveley School—appeared in THE ARCHITECTS' JOURNAL for September 24, 1930. Situated near Mansfield, the site consisted of four acres of spinney, and care was taken only to fell the minimum number of trees to make room for the buildings required to accommodate some 340 girls. From its delightful position, the school has earned for itself the name of "The School in the Wood."

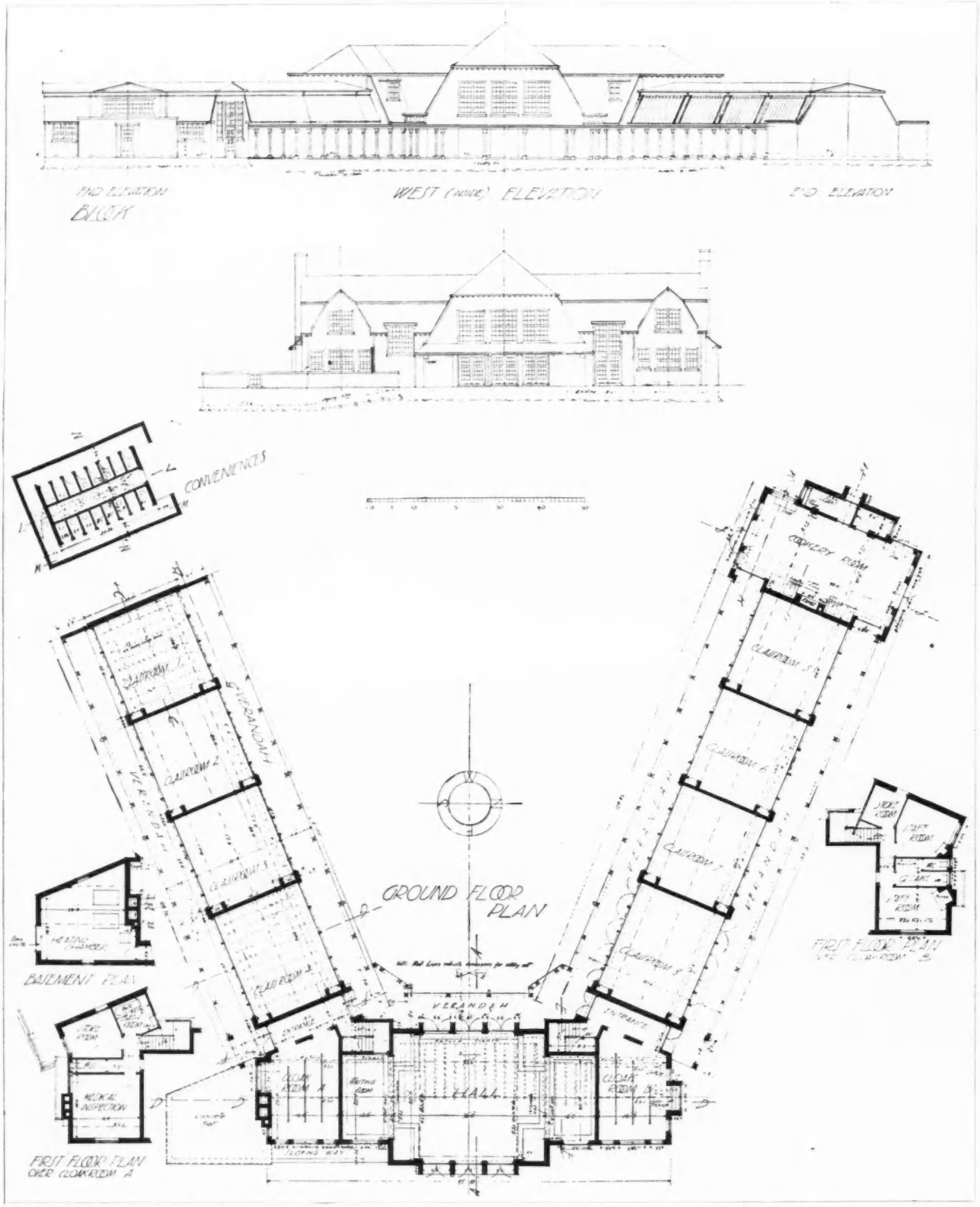
The plan, of blocks in splayed arms, with an assembly hall unit at their convergence, furnishes six rooms each for forty scholars, and two each for fifty. The building is of brick, with a roof of hand-made, sand-faced tiles. The principles of lighting and ventilation are those with which some readers will already be familiar, and others will grasp them from the illustrations, which indicate the types of open and closed verandas adopted according to aspect.

In the assembly hall unit—the hall itself is adapted for stage performances—are also quarters devoted to domestic science and to medical inspection, with store, bathroom and w.c. attached.

The ground enclosed by the two arms has been laid out with footpaths, banks with shrubs, grass, and, in the midst of the grass, a fish-pond and fountain. This layout of the grounds, and the painting, were carried out by the works department of the Derbyshire County Council. The contract price of the buildings themselves was £21,854.



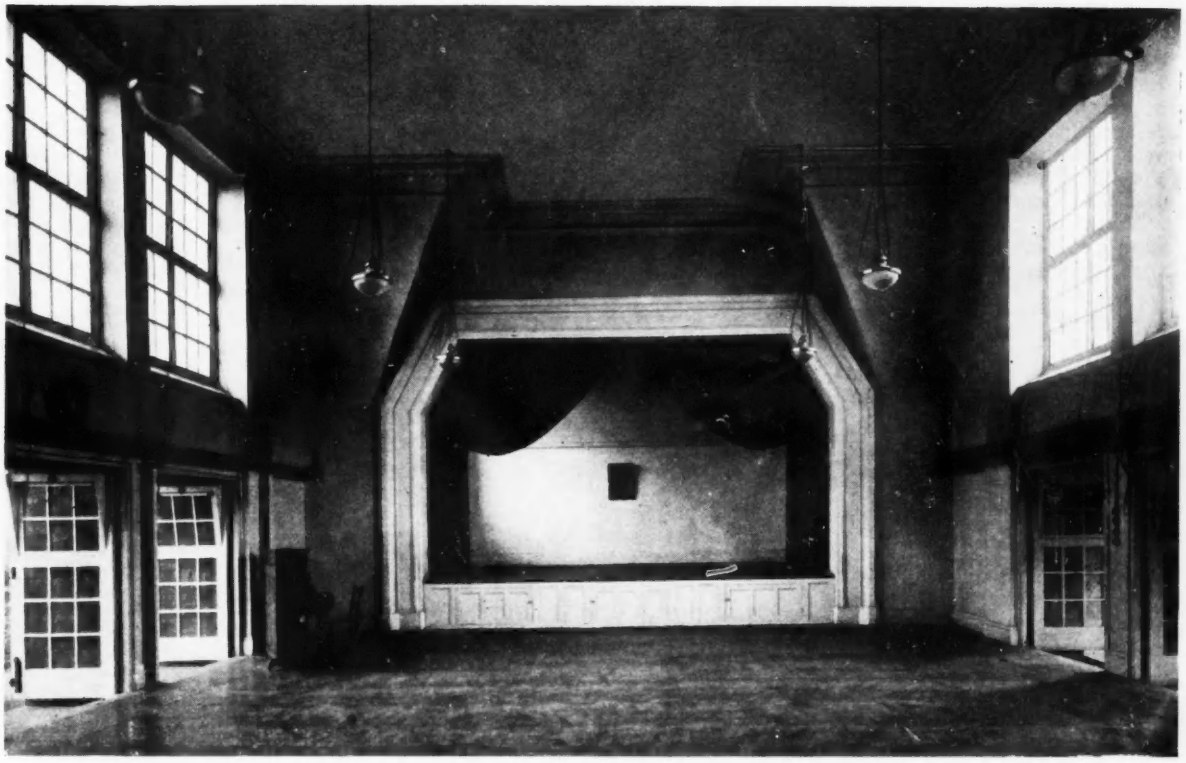
The north side of the south block. This shows, in contradistinction to the typical southerly front, shown above, verandas entirely protected from cold winds by sash windows and patent glazing.



Whaley Thorns School, Derbyshire.]

The west elevation; east elevation; and ground plan. The first-named shows the entire span of the frontage, including the splayed blocks, with the assembly hall unit at its centre. In the space between the arms the ground has been laid out as a water garden.

A portion of the east elevation and the south end, showing the assembly hall, on the right. In all the exterior photographs reproduced, the wooded character of the charming site, from which the school has been popularly christened, is indicated.

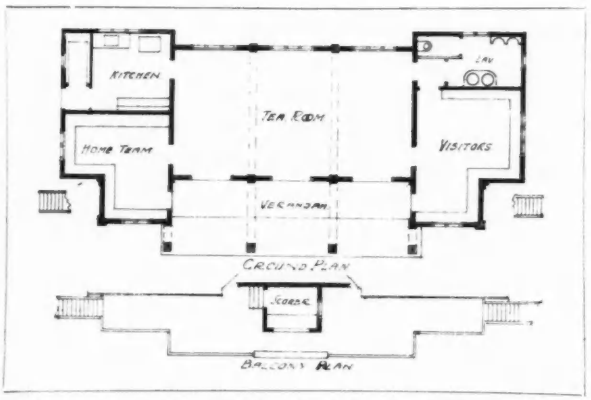


[*By G. W. Widdows.*

An interior view of the assembly hall, looking towards the platform, which has been arranged and fitted with curtains, etc., to make it adaptable for theatrical performances. There is accommodation within the range of buildings for 340 girls in 8 rooms.

SPORTS PAVILIONS AT MILL HILL SCHOOL

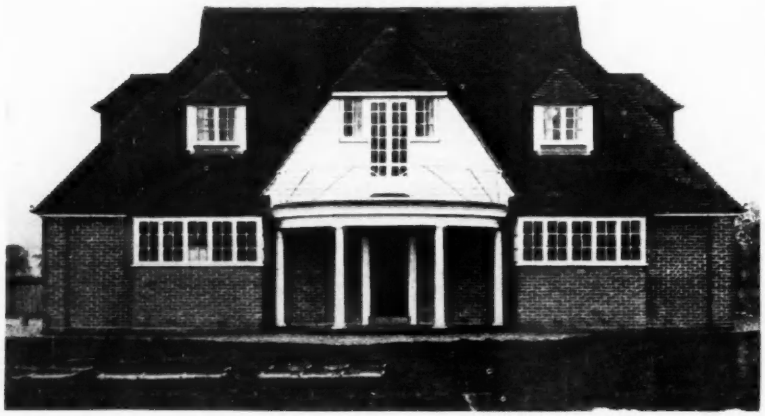
DESIGNED BY R. S. BALGARNIE WYLD



The main front of the cricket pavilion; and the ground-floor and balcony plans. The building is timber framed and weather-boarded on a brick base, with hand-made sand-faced tiles used for the roof. The weather-boarding is painted a cream colour; the columns supporting the scoring balcony and the joinery are white, and the shutters green.

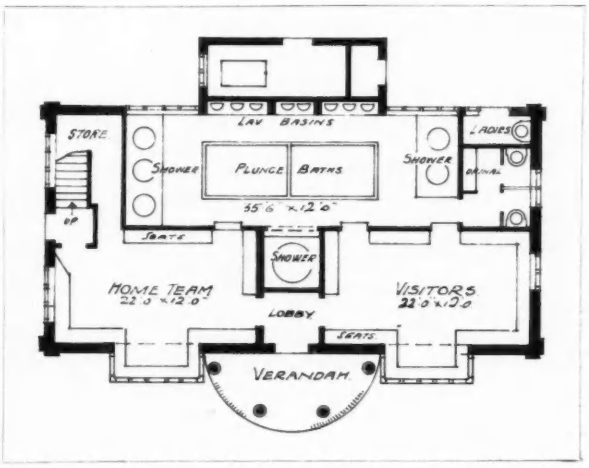
THE two sports pavilions at Mill Hill School, here illustrated, afford an excellent idea of the diversity of planning required for the dressing accommodation, etc., for players participating in our two national games—cricket and football.

The cricket pavilion was erected on somewhat marshy soil, which necessitated a concrete raft being laid for the foundations. The predominant feature of the planning is the large tea-room, which gives on to a veranda and is flanked on one side by the home team's dressing-room and the kitchen; on the other by the visiting team's dressing-room and the lavatory accommodation.



The main entrance front of the Old Millhillians Rugby Football Pavilion. The walls are built of Luton grey bricks, and the roof is covered with sand-faced tiles.

The pavilion in Headstone Lane, Mill Hill, was erected for the Old Millhillians Rugby Football Club. Here, the plan fulfils admirably the purposes of the building, with a generous provision of washing arrangements—a necessity for thirty tired players after a match on a muddy field!



A view of the Old Millhillians Rugby Football Pavilion, showing the entrance to the home team's dressing-room; and the ground-floor plan. The first floor contains a large tea-room, committee-room and a kitchen.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : vi

I TURN CLERK OF WORKS

BY KARSHISH

(H. B. CRESWELL)

I SAID good-bye to Grig when I had been with him nearly seven years. At that time he had not much work, and was loaded down to the scuppers with pupils, for as fast as he jettisoned one he shipped another: I had fallen into a groove of making half-inch and inch details and doing a good deal more for Grig's pupils than Grig was doing for me; I felt the need of experience in other offices, for Grig's practice was almost solely concerned with churches and private houses; and I also wanted to travel.

In bidding good-bye to Grig's office I must say a word of farewell to those I have spoken of as sharing my life there, and whose diverse destinies are a comment on my own.

Tubal, after four years with Grig, prevailed with an aunt to commission him to build her a house, and promptly set up in practice on the strength of her confidence. He engaged an assistant who, he told us, was "better than Zaza"; and he took great credit to himself for designing a house the main elevation of which exactly reproduced an authentic example of Queen Anne at Salisbury. His aunt did him even a greater kindness shortly afterwards by dying and leaving him a competency; following which he married a rich wife; forsook architecture in favour of squirearchy; and now spends his time going about the grounds of his house in Berkshire in a bath chair drawn by a white donkey.

Poor Yeice made a mess of things. Out of mingled folly and misplaced generosity, and in the absence of any sympathetic relations with his father, he secretly made what is called a rash marriage. The marriage, and the whole of the circumstances leading up to it, were known to everyone in the office except Grig, and Tubal was witness at the ceremony; and although the marriage was not so rash as to discourage Yeice from taking his wife with him when he went home for his summer holiday, nor from putting her up in a hotel in the adjoining town from which she visited at her mother-in-law's under her husband's name as a member of a remote collateral branch of the family, and afterwards went to stay in the house on that footing, disaster followed discovery a few months later. The authority of fathers over their sons' alliances was implacable in old families even in those recent times, and poor Yeice's pupilage ended and he was more or less disowned. His capacities were limited; his ideas of the meaning of work inadequate; his wife an encumbrance: his only resources were his personal charm, his social standing and his family connection, and he certainly made the most of them. He must have had some kind of guardian angel to enable him to carry on; and it was the kind of guardian angel that could arrange a chance meeting for him in the street with Zaza at a moment when Zaza was on his way to the bank to deposit his monthly cheque. Ten pounds was the sum Yeice borrowed, and he did it in such a way as to flatter Zaza by his condescension in accepting the loan. I was sufficiently in Zaza's confidence to observe his gratification at having so well played his part in an intimate understanding between gentlemen, and to note also the dispersion of that gratification. The poor little man could afford to be a gentleman for only a very few weeks; but it was characteristic of him that when he had completely surrendered the position by three times writing to Yeice for the money without getting it, he showed no indignation, but a hushed astonishment only. The end of poor Yeice's troubles came when he enlisted in the Imperial Yeomanry and was killed in the South African war.

Chichester, contrary to our ideas of him, proved to be among those whom the gods are inclined to love. The second winter I was at Grig's he was away from the office with a cold, and afterwards began coughing. The persistency of this cough—which resembled a sheep's—was forced upon us by Garston's echoing it from his end of the room in protest of what he considered merely a tiresome habit; but in February Chichester came no more, and we heard he was at Davos. He returned in June plumped out and sunburnt, but fell away in the autumn and we saw his tall gaunt figure no more. He had had another hæmorrhage and, on recovery, was banished to California, where, in high altitudes, he still lives an open-air life.

Potts, by most meritorious application covering many years, at last passed the examination of the Royal Institute and was elected an Associate. He achieved this by disposing of one or two subjects each time he sat—like breaking bottles at a shooting-gallery, Garston told him—and afterwards set up a wooden office in the yard of a suburban railway station, where he practised as house agent, coal merchant and architect; married; became after many years chairman of the Urban District Council and, when at last he died, the account of his funeral was advertised in the posters of the local weekly paper. In his particular sphere, and from his own point of view, Potts's career was a complete success. He realized his wildest dreams.

Zaza, after bettering himself in various offices, obtained the post of chief assistant to a leading firm of architects in Sydney, and took out a brand-new wife to share his success.

As for me, I spent three gorgeous months with Garston making measured drawings and sketches at Christchurch, Wimborne, Romsey, Salisbury and Wells, some of which were afterwards published in the "A.A. Sketch Book"; and under Garston's leadership poaching—as I am afraid it was—the Test and the Avon, and doing certain other things that I ought not to have done but which, in looking back, I do not regret. I then returned to London and got a job at two pounds a week in the office of a city architect of hotels and public-houses, whose practice made it necessary for him to go out to lunch at half-past twelve and return, squiffy, at three, and who was so dilatory in paying up that I left him after three months and have never yet received the fourteen pounds he owed me; worked in various offices on competitions, earning overtime that enabled me to overtake my city losses—if I may so term them—for I had told my father that I could make my own way and was sensitive about asking him for money though I had to sell my good editions and some of my old furniture to tide over the many weeks when I was out of work; and then, suddenly, a balloon ascended one afternoon from the Wandsworth gas works and made a Clerk of Works of me.

The balloon drifted over Harrow and distracted the attention of a boy fielding at the nets; the boy, in consequence, was struck on the head by a cricket ball; his mother fled to his side, after cancelling by telegram my engagement to dine with her, and I went to a conversazione of the Architectural Association at the newly-built Imperial Institute, instead, where I chanced to meet Grig in charge of two little pink-and-white Grigs, one with its back hair up and the other with its back hair down.

In those days I could not be bothered with any women under thirty: young girls impressed me merely as children absurdly dressed up; they also greatly embarrassed me, but whether this was due to an uneasy perception (afterwards to be abundantly justified) that they

were not—in my father's term—safe, I do not know. I conducted these two little Grigs to the buffet—how well I remember it all!—where the one with its hair up, and who wore gloves, partook of an ice; and the one with its hair down had an ice, a ginger cake, a glass of lemonade, another lemonade and an ice; and when I led them back to discard them, I found Grig in conversation with a little man with silky auburn hair, a great pendant moustache, an angry nose, and spectacles of such enormous magnification that his eyes bulged through the lenses in startling distortion and one saw the separate prongs of his pale eyelashes as if through a reading-glass. Grig, with his usual charm, introduced me to Mr. Tallard as though I were the only pupil he had ever had. I shyly disengaged myself as soon as I could, and thought no more of the matter till three days later when I received a letter re-directed from Grig's office. It was dated from H.M. Office of Works and lies before me as I write. One corner of it is crumpled and torn where I held it while I capered round the table waving it over my head.

SIR,

There is a vacancy in this office for a Clerk of Works to take charge of the rebuilding of the Post Office at Brayness.

The salary is two pounds ten shillings a week. Travelling expenses are allowed.

Your attendance on the site would be required at 9 a.m. on next Monday week, the 22nd.

If you wish to apply for the post it is expected you will call at this office, bringing this letter with you, at 11 a.m. next Tuesday, the 19th.

Your obedient servant,
For RICHARD TALLARD,
Chief Surveyor,
T. K. S. PETERSFIELD,
Sec.

This event may seem to be a very small matter, and to open a blind alley to all opportunity; but I was fast growing sick at heart at the vicarious duties of a draughtsman, for which work I was not—as I knew—particularly well-equipped: here, at least, was a chance of testing my capacities and of release from the detestable prospect of asking my father for money. Any doubt of the wisdom of accepting was removed by Grig, who said, when I consulted him: "Certainly, go. The experience will be valuable to you on all counts," and I duly kept the appointment at Whitehall Place in the old house (soon after to be pulled down to make room for the War Office) which was the home of an Office of Works whose then personnel numbered two hundred in place of the two thousand now on its wages list.

There I was received by Mr. Tallard: that is to say, after my letter had been passed from hand to hand by several clerks, I was thrust into a large square room and the door shut behind me. In the middle of that large square room Mr. Tallard sat at a pedestal table where, fed by a clerk standing beside his chair, he was ravenously disembowelling successive files of papers and scribbling notes and directions upon them before he pushed them aside.

I had asininely expected to be greeted, as a *protégé* of Grig's, with a renewal of the social interchanges of the conversazione: but I did not then know Tallard; I did not know the Office of Works; I did not know the world; and I did not know myself. I have no doubt whatever that Tallard perfectly understood my case when he blotted out those expectations with a thoroughness that would have been brutal if it had not been so wise, so necessary and so considerate of my welfare; and that out of kindness of heart he laid it on for me extra thick. There were no favourites at the Office of Works. I had to understand that I was merely a private in the ranks.

I stood inside the door unnoticed, with my complacency trickling away out of my heels, for minutes while Tallard disposed of his immediate influx; and then I wilted as I saw the clerk hand him my crumpled and torn letter—which, as I knew, was also stained with tea—and indicate my presence by a gesture. Tallard gave me a quick flash of distorted eyeballs; read the letter as though he did not know my business and was annoyed at being interrupted; and then said, coldly:

"You wish to apply, do you?"

"Yes, sir."

He fumbled the letter; glanced through it again; grunted so that his body heaved, and then looked across the room and fixed me with his glittering lenses and his threatening nose. His mouth was hidden by his moustache and his face had no kind of expression. If he intended to frighten me he succeeded to admiration. It was as though he was in two minds whether or not to send me to prison, and it was like a sentence from the Bench when he said "A week's notice," and confirmed the conviction by scribbling on the letter and giving instructions to the clerk of which I caught only the words—"Take him . . ."

"There's a form they'll give you to sign. You'd better take the drawings with you," he then said to me; and he slapped down a pencil with a crack flat on the table as an order of dismissal. Then, astonishingly, just as I was turning to go, he said, as he reached across his table for a bundle of papers:

"The sea air will be good for you."

So the cat was out of the bag! I had been living through months of frustration in one room striving to economize, and I felt peeked and no doubt looked it.

Grig had evidently been speaking to Tallard about me, and it was a stranger's kindness of heart that gave a young man, particularly lacking in any aptitude for affairs, the chance of learning to hold his own in conflict with others and to obtain confidence in his judgments and ability to enforce his decisions—for this, more than any task of handling the technicalities of practical building, was what lay before me; and although I was quite unaware of it on that sunny Saturday morning at the end of May when I deposited my luggage in the cloak-room at Brayness station and sallied forth to explore the field of my future activities, it was not particularly with the complexities of building operations, but with the complexities of human nature I was about to grapple.

If I had thoroughly understood this I could not have taken a bigger header into the stream than I did when, after viewing the outside of the Post Office, I entered it and acquainted myself with the inside of the Postmaster. My ardour was, however, tempered by discretion, and before I went in I asked a man in the street what the Postmaster's name was. He told me it was Charles Tyler, and I thereupon went to the counter and asked for Mr. Tyler, giving my name and stating that I was Clerk of Works in charge of the forthcoming additions. The length of time I was kept waiting was no doubt the Postmaster's measure of his own importance and my insignificance, and the disparity was evidently great; but at last a flap at the end of the counter was raised and the wicket below opened to admit me to The Presence.

The Postmaster held court at a dingy, polished, yellow oak table in a bin with a dust-covered glass lid, littered over with bits of torn paper, in company with a gas-pendant of black iron tubing amazingly encrusted with dead flies. Mr. Tyler was entirely unventilated; he was inadequately lighted; and privacy was denied him by a window looking point blank into the Telegraph Office, the glass of which was neither too dirty to see through nor too thick to shut out the ceaseless chattering of the instruments. He proved to be a small, florid, square-shouldered, spectacled man with thick grey hair, heavy moustache and bushy side whiskers, who looked like the reflection of the Emperor Franz Joseph in a tablespoon. He seemed disconcerted at my appearance: whether he expected to see a workman in the gartered moleskins of those days, I do

not know. He gave me no kind of salutation but, after a glance, turned and shifted his blotting pad about uneasily and then said :

" I thought Mr. Titmus was going to look after the building work."

" No. I've been sent down by the Office of Works."

" Oh ! Well ! No one told me you were coming. Why didn't they acquaint me? "

" I've no idea."

" Well, you'd have thought they would, wouldn't you? I'm Postmaster here. You'd think they would let me know what was being done. Eh? "

" I'm afraid it's nothing to do with me."

" I didn't suppose it was. All I say is they ought to have told me. I don't know how it's all going to be managed. I saw Mr. George Bradshaw yesterday, and he didn't have much to say, but my work has got to go on. I can't have the work of the Post Office interfered with : you understand that, don't you? "

" Of course I will do the best I can, Mr. Tyler."

" But will your best be good enough? Now *here's* a thing—I told Mr. Bradshaw about it yesterday. They sent down and put a lot of poles and planks along the wall in the side passage. I told the man take them away; how are the letter-carriers to bring their barrows up the passage if it's to be blocked with builders' stuff—can you tell me that? "

" No. You see I've only just arrived."

" Well then ! That's what I say. The work of the Post Office has got to go on. If my work's going to be interfered with I shall complain to the Postmaster-General. The public has got to be considered even if I haven't. They're going to take the roof off the public office, aren't they? "

" Yes."

" Well, I said all along I didn't want that done. Why can't they build up at the back where they would not be in my way, and leave the front as it is? Eh? "

" Well, Mr. Tyler, the building would not be much to look at from the outside, would it? "

" Much to look at outside ! I have to get my work done *inside*, young man, and it's the *inside* I'm thinking about."

" Well, Mr. Tyler, I will see what can be done and arrange with you before the works are started. It is merely a question of the order in which they are put in hand."

" Yes. Well, you'd better. It's no good Bradshaw beginning to pull the place about and me having to stop him, is it ? "

On this note my first interview with Mr. Tyler ended, leaving me blissfully unaware of its utter dissonance; and I thereupon spurred off to introduce myself to the builders, Messrs. Bradshaw and Son, of Milton Crescent.

NEXT WEEK—VII : BRADSHAW AND SON, BUILDERS

The previous instalments appeared as follows :

May 27. i : I am Articled.
June 3. ii : Episodes of Pupilage.
June 10. iii : Episodes of Growth.
June 17. iv : My First Job : The Sewer.
June 24. v : My First Job : The " Pipes."

LETTERS FROM READERS

Taxation of Land Values

SIR,—If one were to judge only from the reasoning and the prophecies contained in the letter of your correspondent, Professor G. M. Trevelyan, and your leading article in your issue for June 17, one would expect to find at present the houses and other buildings in our towns and villages well spread out over the land, having large gardens attached to the houses and with many open spaces and pieces of land reserved for use as recreation grounds; also that when the tax on land values comes into operation all these good things will disappear.

Quite the contrary is the case, as the advocates of the taxation of land values have been pointing out during the whole time of the agitation for this much-needed reform. Our towns are congested, there are few open spaces, gardens are small or non-existent, flats are piled over one another in tenements, and on every hand one sees similar results of the attempt to make the most of dear building land.

Around every town, large and small, there is a ring of land, priced for building purposes at many times the amount it is fetching as agricultural land, and in the towns proper are many sites either partially used, such as places for posters, etc., or not used at all, for which a high price is wanted as building sites. The existence of the system of holding up land until it ripens makes the price of every site dearer than it should be. A tax on land values will tend to bring the price of all vacant land down to its natural price by, as you say, forcing vacant land into the market. The result will be that when land is cheaper it will be easier than before to provide a large garden for each house and to provide permanent open spaces owned by the municipality or clubs and others.

In every town, without exception, there are clear examples of the value of lands being made higher by the direct action of the municipality and by the general activities of the citizens. It is right that this value should be taken in taxation to meet the expenses of the municipality and for the common good. On the other hand when a man builds a house or adds to an existing one he provides the whole value—the municipality provides none of it—and yet he is taxed in proportion as he has added value to the town. This is a deterrent to building and to improvement and it would be a much wiser policy to levy taxes on each person in proportion to the benefit each received from the local authority and central government, that is, according to the value of the land occupied by each, and correspondingly relieve from taxes the buildings and other improvements created by individuals.

The principle of the taxation of land values is a good one. There are bound to be hardships when changing over from the existing system to a new one. There will also be difficulties; and I agree heartily with Professor Trevelyan that special legislation, giving powers to local authorities to control the development of towns, should be enacted. But because this may be required is no excuse for decrying, as is so often being done today, the proposal to tax land values, which in itself is a just proposal. On the contrary, let those who desire widespread towns and a solution of our housing problem welcome this proposal and press for legislation giving such powers to local authorities as they consider are required to ensure the growth of our towns on well-ordered lines.

A. D. H.

Lowest Tenders

SIR,—I should be glad if you would kindly allow me a little space in your JOURNAL to vent a grievance which I and other builders have against the practice of accepting tenders which are not the lowest in competition.

During the past few months I have gained information that I have been the victim of decisions of this kind, and in both cases I have been keen to obtain the work, and have spent a considerable amount of time in the preparation of my price.

Whilst I have no wish to question the general fairness of architects, I feel that, despite the usual covering clause which appears in specifications, " that the lowest or any tender will not necessarily be accepted," it is their duty, if they send out invitations to several builders, to accept the lowest.

After all, architects have every opportunity to obtain information as to our qualities before inviting us to tender.

Most of the trouble appears to come

from clients who are keen on employing a particular builder, and the competition of his local rivals is only obtained as a check upon his price.

This procedure is grossly unfair, and was especially so in one case of which I heard, where the firm finally selected were fourth on the list and were given an opportunity of reducing their price to compare favourably with the lowest tender.

I feel that a client, if he accepts any tender, should be bound by law to accept the lowest price or compensate the unfortunate bidder for his loss.

An architect who is a business man as well as an artist should realize that, though it is a trivial matter for him as regards expense to send out several sets of drawings and specifications, it is a costly and aggravating matter for builders to prepare tenders with no chance of success.

SUBURBAN BUILDER

Graded Materials

SIR,—May I make one comment on your excellent plywood supplement to your issue of June 24? It is on the question of the grading of materials, a subject with which, in my view, the architect is not sufficiently familiar.

I can best explain what I mean by taking an example from the plywood industry. Other industries will have their special problems, but the principles of grading are probably present in some form or other in many other industries.

Venesta birch plywood, for instance, is all *made* the same way, but the outside veneers are sorted according to timber variations, such as the number of knots per unit area. Some boards are made, therefore, with a few knots on both sides, while others have no knots on one side and hardly any on the reverse. The former are useful where the plywood is to be painted or not seen, and the latter where the grain will be seen or where a special highly-painted finish is wanted; but both boards are equally well made.

Many architects are now wasting money because a grade suitable for staining and polishing is used for purposes where the figure will not be seen, and many other architects get disappointing results by not using a sufficiently high grade just for those parts of a job that will be seen.

To illustrate my point the following examples show how three architects have used the most suitable grade for each specific job :

1 : In our own offices (designed by Louis de Soissons and Grey Wornum) Venesta NILNOT birch was used because it was to be lightly stained and polished.

NILNOT is a grade of Venesta birch plywood free from knots on one side with a very few small knots on the other.

2 : In a staircase designed by Serge Chermayeff, Venesta SPECNOT birch was used because he wanted a high-class painted finish on a curved surface.

SPECNOT is a grade of Venesta birch plywood with a very few tiny knots on one side, the other side the same as the back of NILNOT.

3 : In the showrooms of the Cresta factory by Wells Coates, Venesta SUMNOT birch was used for partitions, cupboards, etc., that were to be painted.

SUMNOT is a grade of Venesta birch plywood with a few small knots on both sides, rather more on one side.

I am convinced from our experience in giving technical information that if more architects would use grading systems—such as the table we have ourselves prepared, and which is available to them—not only for plywood but for all materials, considerable economies would be made while at the same time getting better results.

T. CRAVEN PRITCHARD
(VENESTA, LIMITED)

Cavity Walling

SIR,—"W. A. D." tries for a debating point (JOURNAL, page 862) by decrying cubing as a method of estimating, while totally ignoring the fact that I pointed out that quantities would disclose a greater discrepancy in his own estimate. My thorough dislike of the common form of cavity walling is founded on experience of its behaviour in harbouring dirt, insects, etc., under exposed conditions, and on what I have seen in a number of instances when it has been opened up.

I regret that I cannot accept "W.A.D.'s" invitation to discuss the matter at such a length as to be likely to convince him, but I gladly offer him this alternative suggestion : Off the dampcourse build up the facing bricks in stretcher bond as though for cavity walling; when from four to six courses high all round, parge with waterproofed cement mortar and back up with common brickwork; tie with short pieces of hoop-iron embedded in waterproof mortar; repeat operations in the same order. Do not put a piano in the house until the walls have dried out, especially if it is a grand piano.

To "R. W. M." I would suggest that he consider the additional cube in his concrete lintols, and the measurement of the lead or other protection for the frames under them ; the additional finishings to reveals; the width of his thresholds; the increased perimeter of his building and the effect of this on the measurement of his brickwork, facings, eaves, soffits, fascias, guttering, roof-coverings and the like. Having done so, and valued the additional work, let him rejoice in his good fortune in finding so many small builders foolish enough to do this additional work for nothing. He will then perhaps understand why some of them are unable to pay their way.

J. R. T.

Cedar Shingles

SIR,—Our attention has been drawn to the interesting query appearing in your issue for April 29 on the above subject. Your expert's surmise as to the cause of the more rapid decay of oak shingles on the lychgate than on the church steeple is correct; there is also, no doubt, another reason which will account for this decay, and that will be the greater care with which oak shingles were selected in 1860. Only straight-grained shingles without knots will stand the weather even if the pitch be steep.

With regard to cedar shingles, the statement that they will only last for fifteen years can refer only to slash-grained shingles of inferior quality, which are sold at a very low price in Canada and in the United States.

Straight edge, or so-called edge-grain shingles, which do not show any figuring or knots, will stand, on a conservative estimate, without curling or splitting, up to sixty years. There is ample evidence for the correctness of this view, and the Agent-General for British Columbia, who is thoroughly familiar with the subject of red cedar shingles, will no doubt be glad to furnish authentic information as to the merits of edge-grain shingles. Even the best oak shingles curl and split, whereas red cedar shingles, cut on the edge-grain, lie permanently flat and suffer no distortion.

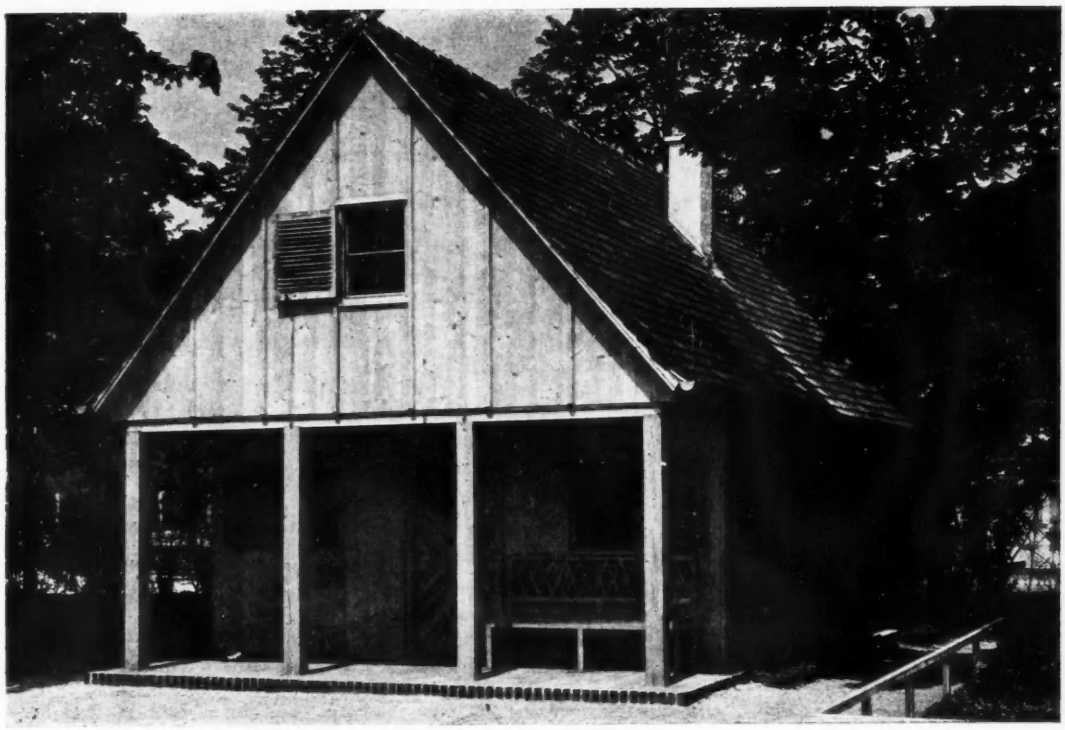
W. H. COLT, LTD.

Transport Chaos

SIR,—As one interested in the attempts which are being made to remedy the chaotic state of transport in this country, I should like to call your attention to a national conference of local authorities which has been called by the Leicester City Council to discuss canal development.

The question of road congestion and damage by heavy traffic is bound to crop up and is of vital interest to architects of houses adjacent to main roads. May I suggest, therefore, that the conference would be a fitting occasion to discuss national transport as a whole ? So far, I understand, no invitation to the conference has been issued to representatives of the three great inland carrying systems—the railways, the roads and the canals.

G. B. J. ATHOE
(SECRETARY, INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

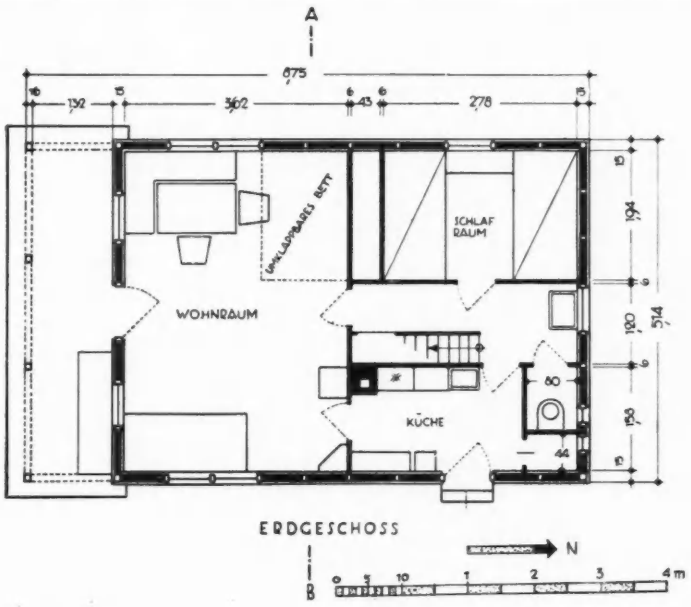


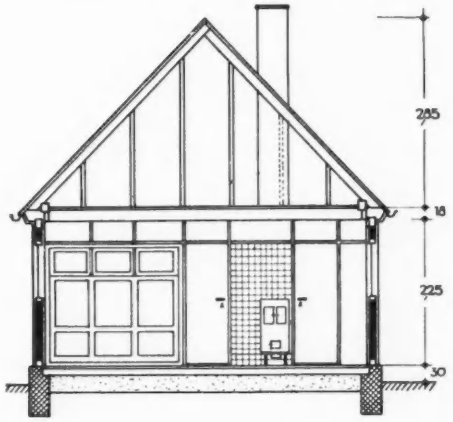
A wooden week-end house in Bavaria, designed by Jakob Kader.

LITERATURE

SMALL HOUSES FOR SMALL MEANS

MOST people imagine that Germany's admittedly immense contribution to modern housing is confined to those huge zigzags of tenement flats which have become such a conspicuous feature of the outskirts of the larger towns. This is an error. German architects are the first to admit that these represent not an ideal solution of working-class "home-hunger," but the best compromise possible in the face of economic difficulties, which have had no parallel in this country. But even as it is, quite a number of "*Reihenhäuser*," or rows of separate two- and three-storied houses, of the kind familiar in





Ground-floor plan and cross section of the wooden week-end house in Bavaria, an illustration of which is reproduced above. The accommodation shown is as follows: Wohnraum = living-room; küche = kitchen; and schlafraum = sleeping-room.

[*From* Das Kleinhaus: seine Konstruktion und Einrichtung.

our own municipal housing estates, have been built since the war to the designs of architects like Salvisberg and Tessenow.

Herr Harbers is an enthusiastic advocate of the retention of the small, where possible unattached, house within outer-city limits; and makes out an unassailable economic case for its preservation and perpetuation. He clearly prefers gabled to flat roofs. His eminently practical book offers detailed "type-plans" to both architects and their clients of a number of these (some with tiled walls and some with timber-faced gables), ranging in price from £300 to £750. Details of cost and dimensions are worked out minutely, and considered in all their bearings in the most exhaustive and methodical manner.

Commendably Herr Harbers insists on the paramount importance of proper orientation. With prevalent Central-European weather conditions the gables of houses should be made to face north and south. Commendably he deplores the "picturesque" hipped or mansard roof, which Teutonic and Latin popular taste still delights in, as both hideous and unpractical. The staircase, preferably without any turn, or intermediate landing, should be situated in the north-west corner of the cottage. The living-room should look south or west, the bedroom south or east, the kitchen—which need not exceed 6–9 square metres in area—west or north; and the bathroom always north. Furniture ought to be built in as much as possible. Free-standing tables, chairs, chests of drawers and wardrobes should be made low, and not too long or deep.

It is curious how startlingly similar in plan and appearance are the cottages of all ages and peoples, whether typical of sub-arctic, temperate, sub-tropical or tropical zones of climate. This simple fact is well brought home by the illustrations. There are pertinent examples from the Adriatic and Ægean coasts. Some inviting little houses on islands of the Greek Archipelago are shown; and a charmingly graphic sketch by a Greek architect, M. Coste-Lixouri, for a small "*mas*" designed by him "for the Mediterranean." A curious old four-square, flat-roofed "functional" house in Munich would seem to show that the type does not necessarily weather as well as has been claimed by its advocates. A wooden "week-end house" to dream of (illustrated on the previous page) designed by Jakob Kader, of Munich, costing only £224, is likely to cause a serious migration from England to Bavaria.

The fittings and furniture shown are sensible, delightful and obviously economical. The short English texts—which cover the general sub-headings, but not the explanatory details of the individual types reproduced, or the very important price and quantity schedules—are, for once, admirably translated. No English exemplars of small dwellings, ancient or modern, are illustrated. Considering (as Herr Harbers has reminded us) that England was the pioneer in the rational planning of small houses, and that we can show modern examples of this type which rank with, if they do not actually excel, the very best recent Continental designs, the omission is pretty certainly the result of what can only be called the reprehensible indifference of English architects to the architectural prestige of their own country in others.

P. M. S.

Das Kleinhaus: seine Konstruktion und Einrichtung. By Guido Harbers. Munich: Georg D. W. Callwey Verlag.

THE ART OF THE CAMERA

THE latest issue (for 1931) of *The British Journal Photographic Almanac* is, briefly speaking, a mine of information for all camera readers.

The ordinary amateur will study with delight and some envy the many pages of reviews dealing with the latest improvements for snapshot and cine-photography. For the more experienced the book contains formulæ and methods, and illustrations of gadgets which can be made at home. Articles deal with the romance of the invention and development of photography, with modern enlarging apparatus, colour photography and the Bromoil process—a new formula for the benefit of those working this process in trying climates.

The pictures alone are an immense attraction and well display the variety and resource of those who practice photography from the artistic standpoint. The illustration of the Palais des Papes, Avignon, by E. Chambre Hardman, provides an excellent example of the fundamental importance of light and shade in the pictorial representation of buildings.

A full list of photographic societies and allied bodies in the British Isles is also incorporated in the almanac.

The British Journal Photographic Almanac, 1931. Edited by George E. Brown, F.I.C. London: Henry Greenwood & Co., Ltd. Price 2s. (paper covers) net; 3s. (cloth bound) net.

[*From* The British Journal Photographic Almanac, 1931.
Palais des Papes, Avignon. By E. Chambre Hardman.

THE STORY OF ARCHITECTURE

THOSE who have read the first volume of Mr. Walter Godfrey's *Story of Architecture in England*, published some months ago, will remember that in it the author traced the history of the mistress art from Roman times to the beginning of the fifteenth century. He told us of the great period of church building, starting with the Roman basilica and rude Saxon chapel, the Norman style and the gradual evolution of Gothic through all its splendid phases till the glories of Perpendicular, which only waned with the coming of the Renaissance. Though churches naturally formed the principal theme of volume one, castles, manor houses and other domestic examples also received full attention.

In his second volume, recently

published, the author completes the cycle of the story of English architecture throughout the course of the Renaissance. The first chapter deals with the Tudor style, and others are devoted successively to Elizabethan and Jacobean, Stuart, Palladian and Georgian architecture, ending with the Classic Revival, the brothers Adam, and the neo-Greek style of the Regency. In contrast with the period of church building dealt with in the first volume, the second volume now under review is essentially one of house building, and we are afforded the opportunity of tracing the evolution of the English house, of large, "middling" or small size, from the castle and fortified manor of the Middle Ages to the country mansion and town house of the early nineteenth century.

Both volumes have obviously been planned for the lay reader as much as for the professional man; no one need fear being bewildered with technical terms or a mass of mixed details. Mr. Godfrey states in his foreword that he has "endeavoured to present a connected story, to link the character of the building craft to the life of the times, and awaken enthusiasm for an art that mirrors much of our native genius. Technicalities have been avoided as far as possible, with a view to the needs of the general public and of the schools . . . many details that are usually noticed only by architects are pointed out and their significance explained."

No matter how interesting a book on the story of architecture may be, much of its value lies in the elucidatory illustrations. Here, in the second volume alone, are provided over one hundred and fifty illustrations—drawings, photographs and plans—of churches, cathedrals and castles, manor houses, mansions, civic buildings, etc. The many drawings have been executed by well-known architects, including W. Curtis Green, A. C. Bossom, Maurice Adams, Edwin Gunn and John Begg, and all are notable for their agreeable draughtsmanship.

The Story of Architecture in England. Volume i—Renaissance. By Walter Godfrey, F.S.A., F.R.I.B.A. London: B. T. Batsford, Ltd. Price 5s. 6d. net.

[Some of the drawings published in the above book are reproduced in the Sketch Club pages overleaf.—ED. A.J.]

THE ART OF LETTERING

THIS is not so much a treatise on lettering with examples, as a very thorough examination of what exactly is meant by the term Art of Lettering, and to what extent it might be applied to the use of lettering in present-day commerce.

Lettering in stone, sign-writing, applied and engraved lettering are dealt with in separate chapters with a final chapter of general considerations.

As we know, the standard of lettering in stone has been bettered out of all recognition from the thing it was fifty years ago, with the curious exception of gravestone lettering, which has fallen into the clutches of a base form of mass production from which all taste has been excluded. The book makes a plea for better lettering—simple but better lettering—in this important branch, and suggests that a card of sample lettering, if it could be introduced into the tombstone mason's shop, would effect a change sooner than any other method. I suggest also some form of publicity on the part of English quarry-owners as a means of ousting the vile purity of Italian imported marble.

The committee who produced the book "are convinced that the continuance by artist craftsmen of experimental work is an essential condition of any lasting improvement in the standard of lettering in common use," and they are certain that the present workman does not fall short of his predecessors in times past in ability or in his pride in the quality of his work. "'To make a good job of it' is an ideal, understood by almost all workmen."

F.

The Art of Lettering and Its Use in Divers Crafts and Trades. Issued by the British Institute of Industrial Art. Oxford University Press and Humphrey Milford. Price 3s. 6d. net.

THE HOLIDAY SKETCHES COMPETITION: RULES

1. Three competitions will be held to cover the 1931 holiday season, the closing dates of each being in the middle of July, August and September respectively.

2. The competitions are open to any reader of THE ARCHITECTS' JOURNAL.

3. Two prizes, a first prize of Ten Guineas and a second prize of Five Guineas, will be awarded in each month's competition for the best and next-best sketches sent in.

4. Competitors may enter for any or all of the three months indicated, if they choose, but no competitor can win more than one prize.

5. A maximum of five drawings may be submitted by individual competitors for each month's competition. Such batches must be sent complete under the same cover.

6. The size of the drawings is not to exceed that of Royal drawing-paper, i.e. 24 inches by 19 inches.

7. All drawings should possess some definite architectural or craftsmanship interest, but they need not be exclusively concerned with buildings, and drawings of boats, vehicles, etc., will also be eligible.

8. The drawings will be judged by the Editor of THE ARCHITECTS' JOURNAL, whose decision will be final.

9. Entries for the July competition should reach the Editor of THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate, Westminster, S.W.1, between the first post on June 15 and the first post on July 14. The result of the competition will be announced in THE ARCHITECTS' JOURNAL for August 12.

10. Entries for the August competition should reach these offices between the first post on July 15 and the first post on August 17. The result of the competition will be announced in THE ARCHITECTS' JOURNAL for September 9.

11. Entries for the September competition should reach these offices between the first post on August 18 and the first post on September 15. The result of this competition will be announced in THE ARCHITECTS' JOURNAL for October 7.

12. A motto of one word is to be chosen by the competitor, who will remain known by this motto until the award has been made. Only then will his identity be divulged.

13. Each entry must be accompanied by a sealed letter giving the competitor's name, address and occupation (whether principal, assistant or student). The letter should also state that the competitor will observe the rules of the competition and that the drawings submitted are his work, executed on his holiday this year. It must be enclosed in an envelope sealed with a blank seal and bearing nothing but a motto label on which is written the motto chosen by the competitor and the number of drawings entered. Copies of this label will be found in THE ARCHITECTS' JOURNAL during the period covered by the competitions. (See p. xlix of this issue.)

14. Each drawing must bear on the back a similar motto label bearing the competitor's motto and the number of drawings entered. No other means of identification must appear on the drawing. Drawings bearing a signature will be disqualified; so will drawings not bearing the printed motto label.

15. Owing to the drawings being submitted under a pseudonym no acknowledgment can be sent.

16. THE ARCHITECTS' JOURNAL will publish a selection of the drawings submitted.

17. No responsibility can be taken by the Architectural Press for loss or damage.

By Arthur L. Hall. (Watercolour : 10″ × 14½″)
The Water Gate, Essex Street, Strand, London.

By William E. Wilmshurst. *Shere, Surrey.* (Pencil : 6″ × 4″)

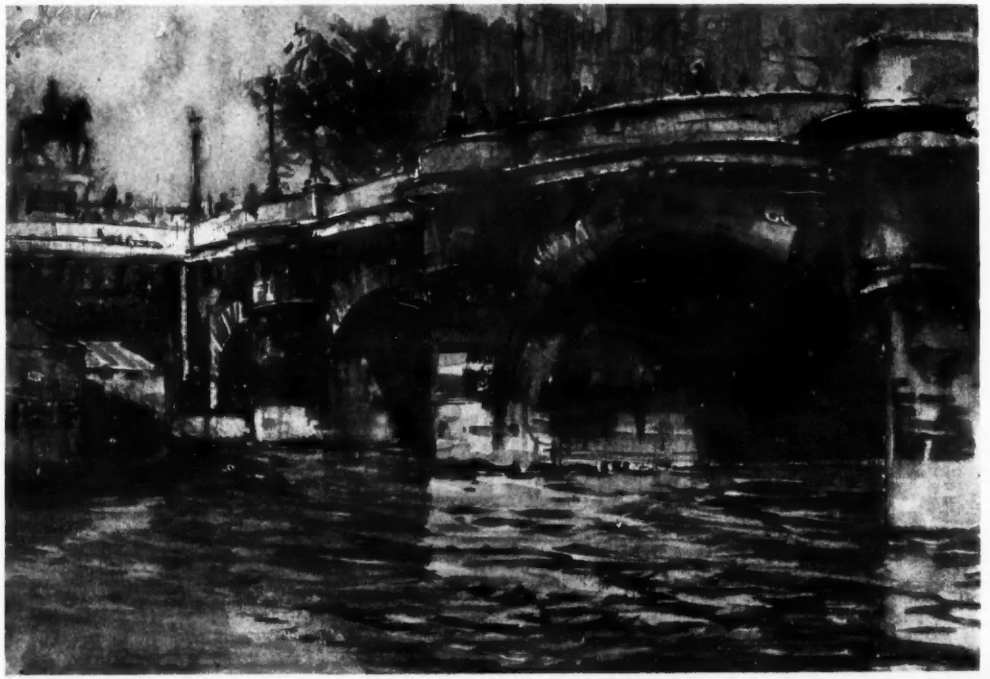
By W. E. Riley. (Watercolour : 10″ × 14½″)
The Belfry and Square, Bruges, Belgium.

THE SKETCH CLUB

THIRTY-SECOND SESSION

THE brush, the pencil and the pen are the implements by the aid of which the mental impressions here recorded have been fixed. The pencil happens to figure chiefly as an instrument of precision, the brush chiefly as a wand with which to conjure atmosphere on to paper, the pen as both. But there is nothing inalienable about these functions, or indeed, those of other methods of pictorial representation, not even excepting photography. It is true that pencil and water-colour are more convenient for work "in the field," and that the impressionism of pen and ink—essentially weapons of the studio—is more deliberate. But that the effect is not necessarily less spontaneous is clear.

It is not every sketcher who has all media equally at command; hence, no doubt, the development of a partiality for a particular class of subject. There are ten thousand million potential subjects, and hundreds of sketchers among readers of THE ARCHITECTS' JOURNAL. The fruits of their holiday sketching, this summer, are certain to enliven the Sketch Club for months to come. There is still nearly a fortnight in which entries may be made in the first of the three Holiday Sketches Competitions, of which the rules are printed on the preceding page.

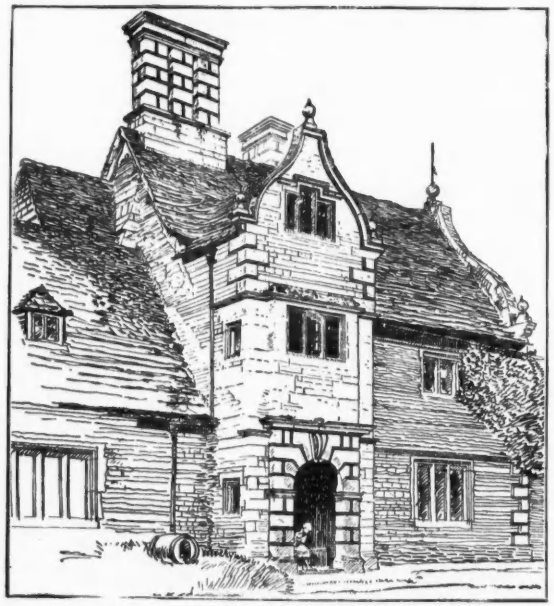


By W. E. Riley
(Watercolour : 15½″ × 10½″)

The Pont Neuf,
Paris, France.

By W. E. Riley
(Watercolour : 15¼″ × 10⅛″)

The Pont Neuf, Paris, France.



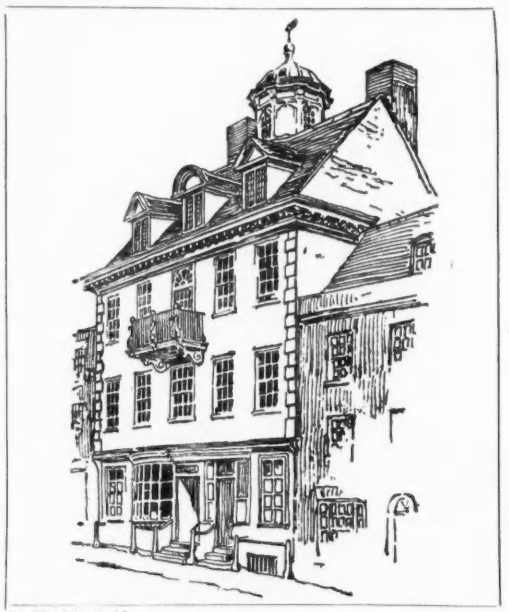
By W. Curtis Green.

Porch and Chimney, Glinton, Northamptonshire.

By E. F. Harvey.

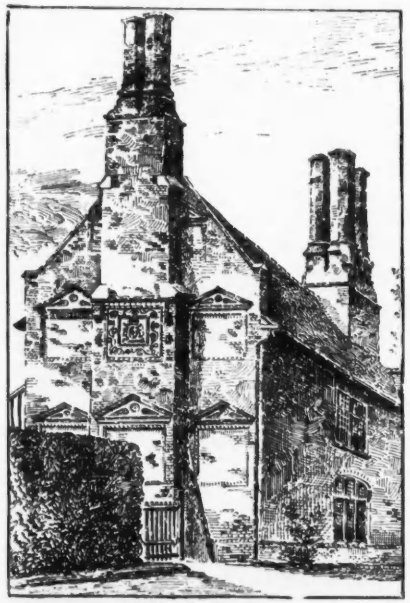
Brede Place, Sussex. A Tudor Manor House.

The pen and ink sketches reproduced on this page are selected from the illustrations to "The Story of Architecture in England," Part 2, "From Tudor Times to the End of the Georgian Period," by Walter H. Godfrey (B. T. Batsford, Ltd.), of which a review appears on page 20.



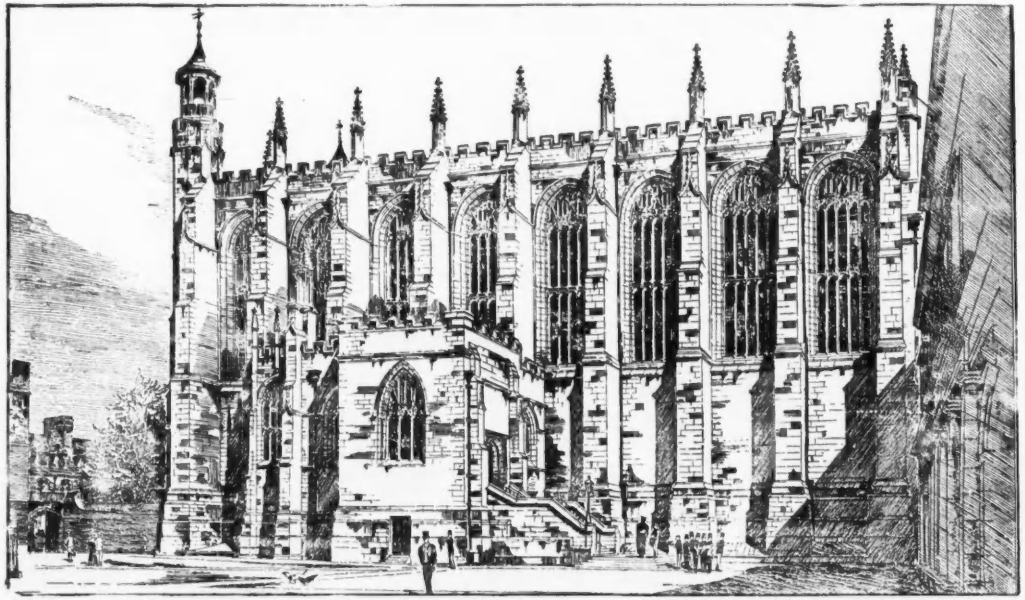
By W. H. Godfrey.

Cupola House, Bury St. Edmunds, Suffolk.



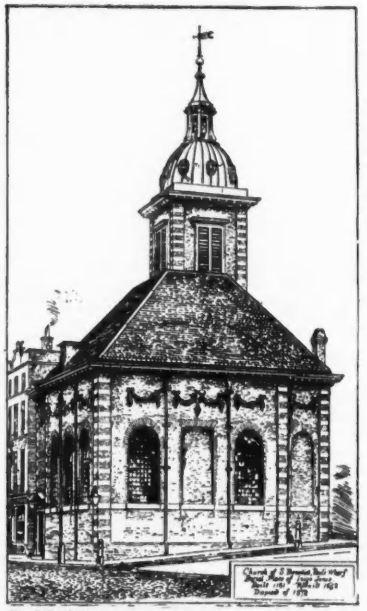
By E. Preston Willins.

Little Fransham Old Hall, Norfolk.



By Roland W. Paul.

Eton College Chapel, North Side.



By W. Niven.

St. Benet, Paul's Wharf, London.

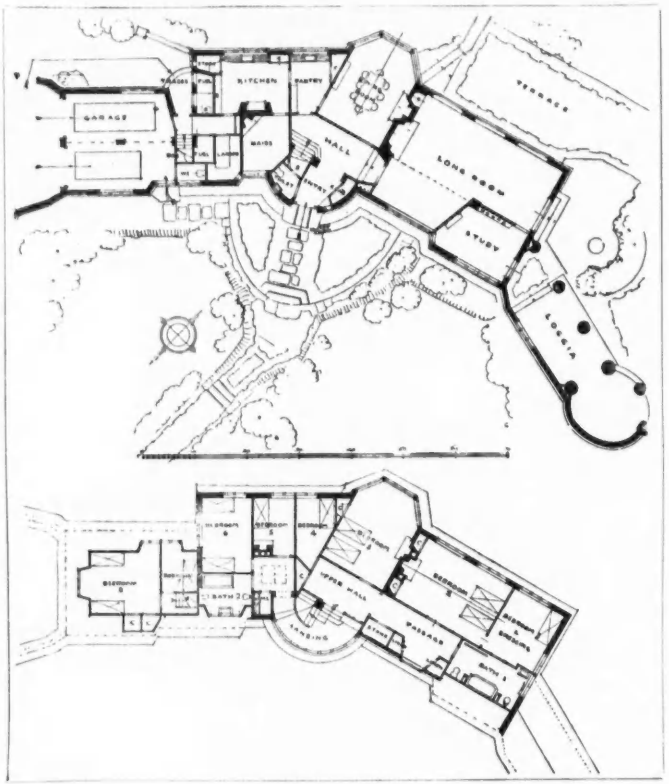
A general view of the main front from the north-west. The walls are built of whitened bricks and the weatherboarding is in elm. The roof is covered with Norfolk reed thatch.

The loggia on the garden front. The piers are of whitened concrete and the beams of oak timbering. The paving is of stone and brick. On the open rough larch timbered roof are perches for peacocks.

BOLTON MUIR, GIFFORD, SCOTLAND

DESIGNED BY P. D. HEPWORTH

ONE of the many interesting features of the July issue of *The Architectural Review* is an example of the domestic work of Mr. P. D. Hepworth — a house at Gifford, Scotland —plans and photographs of which are reproduced on this page. As will be seen, the winged plan has the garage on one side of the house proper, and a covered loggia on the other. The latter is seen in the photograph below.



Ground- and first-floor plans. The half elliptical forecourt is paved with pebbles.

The garden front from the south-west, showing the loggia on the left. The three semi-circular - headed windows light the "long" room; those in the projecting bay, the dining-room.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Rural Housing Development

BEFORE the present session closes the Government hope to receive the sanction of Parliament for their plans for rural housing development. It is expected that in the next year some 40,000 additional houses will be built in agricultural areas.

The Government's new Bill proposes to set up a central advisory body for England and Wales, and a second body for Scotland, to consider building schemes submitted by authorities in local areas. The committee will not have the powers of a central building board, but will be of an advisory nature. In all cases where the local authority considers that the existing subsidy of £11 a year for forty years is not enough to justify it putting further work in hand, the advisory committee will examine the financial position of the authority, and decide whether an increased grant shall be paid from national funds, and, if so, what the amount of the grant shall be. It is hoped to build the new houses at a cost of between £300 and £350 each and to let them at an economic rent of less than 5s. a week.

The financial resolution on which the Bill is to be founded was tabled last week in the following terms :

That it is expedient—

a : to authorize the payment, out of moneys provided by Parliament, of such special contributions, payable annually for a period of forty years, as the Minister of Health and the Department of Health for Scotland, respectively, may, on the recommendation of committees appointed by them with the approval of the Treasury and on such conditions as they may with the like approval determine, undertake to make towards the expenses to be incurred by rural district councils in England in providing houses in agricultural parishes for agricultural workers and persons of substantially the same economic position, and by county councils in Scotland in providing houses for such persons as aforesaid in rural areas;

Provided that—

i : such contributions shall be made only to councils who satisfy the said committees, acting in accordance with such general directions as may be given to them by the Minister or, as the case may be, by the Department, that their financial resources are insufficient to enable them without such assistance to make adequate provision in regard to the matters aforesaid;

ii : the rents to be charged for houses in respect of which such contributions are made shall not, notwithstanding anything in section three of the Housing (Financial Provisions) Act, 1924, exceed such sums as the Minister and the Department respectively may, in accordance with the recommendations of the said committees, determine; and

iii : the present capital values of such contributions, as calculated at the dates when the Minister and the Department respectively undertake to make them, shall not in the aggregate exceed, as respects England, eighty ninety-first parts and, as respects Scotland, eleven ninety-first parts of the sum of two million pounds;

b : to authorise the Minister and the Department respectively to assist rural district councils in England and county councils in Scotland in providing dwelling accommodation in such localities and for such persons as are mentioned in the preceding paragraph by themselves acquiring land and erecting houses, or by arranging with some other Government department to acquire land and erect houses, on behalf of and at the expense of those councils; and

c : to make provisions consequential upon, or ancillary to, certain of the matters aforesaid.

The Two Bridge Schemes

Asked, at question time, for the latest information on the Charing Cross and Waterloo Bridge schemes, Mr. Morrison, Minister of Transport, said that he understood that the London County Council had not yet come to a decision upon the report of the advisory committee appointed by them regarding Charing Cross Bridge, and that pending a decision being reached with regard to this bridge they had deferred the reconstruction of Waterloo Bridge.

Housing by Voluntary Associations

Mr. Mills asked how many housing associations to build houses to let had begun to operate under the latest Housing Act; whether any encouragement was given to those voluntary associations; and whether the Councils of Harpenden, Ware, Dorking and Erith had yet begun to take advantage of the proposals or whether they proposed to build direct or by contract under their authority.

Miss Susan Lawrence said that she was aware of two cases in which arrangements were being made between a local authority and a public utility society under section 29 of the Housing Act, 1930, but she was not aware of the making of any such arrangement by the Councils mentioned in the second part of the question. The Ware Council had, however, undertaken to grant a loan under the Housing Act, 1925, and subsidy under the Housing Act of 1924 to a public utility society proposing to erect houses for letting.

QUESTIONS THAT ARISE

Breeze Slab Partitions

E. W. writes : "*I should be glad of your expert's opinion as to the advisability of allowing breeze slab or similar partitions for bedrooms, etc., to rest on wooden floor joists.*"

Like many other modern practices in cheap building, this practice has obvious disadvantages (shrinkage of timber with consequent slight settlement, subjection to vibration, etc.), but in at least nine cases out of ten no evil appears to follow, and it would be hard to say that the practice ought to cease. It is, of course, much better to provide unyielding support. E. G.

Cracks in Plaster

F. J. C. writes : "*A large dining-room ceiling, in which cracks have appeared, was redecorated several years ago and panelled in relief, with Tynecastle enrichments, the main lines of panels being placed on wood back-plate screwed up in the hope that this would prevent further cracking, papering having previously been used without success. The construction is ordinary lime plaster and wood laths on 9 in. by 2 in. wood joists, with asphalt flat over, and the cause of cracks appears to be that the joists are not stiff enough for the span—21 ft. 6 ins.—and the whole flat moves, particularly in hot weather. Special paper with canvas back has also been tried. The plaster is not loose and is generally in fairly good condition, and cracks reappear in the same places. Can your expert suggest any treatment that would be satisfactory ?*

The only sure cure seems to be the lining of the surface with some form of wall-board stiff enough to support itself, without attachment to the plaster and free to move at its joints without opening. If a panelled treatment is permissible this can be easily arranged. Plywood would probably be the lightest and stiffest material, and each panel should be fixed along its centre through the plaster to a line of joists, and covered and supported (but not fixed) by the enriched ribs. The ceiling can be painted or distempered in the ordinary way. E. G.

Zinc Gutters

R. writes : *In course of inspection of some houses which I am having repaired, I have observed that the guttering, which is of zinc, while in a fair state of preservation, has worn thin in parts and shows a number of tiny perforations. Is there any filling or stopping which I can specify to seal off these perforations, which are really only a series of "pin holes" ?*

Bituminous paint, which has very good covering powers, thickly applied, would be a temporary measure, and unless the guttering was in very bad condition might seal off these minute holes, which sometimes appear in zinc gutters, for a period.

However, I have found that zinc guttering, when it begins to become faulty, needs so much attention that renewal in cast iron is the cheapest solution in the end. W. A. D.

LAW REPORTS

DISPUTE BETWEEN PROFESSIONAL MEN

Payne v. *Marshall. King's Bench Division. Before Mr. Justice Finlay*

THIS was an action by Mr. Edward H. Payne, an architect practising at John Street, Bedford Row, W.C., against Mr. G. E. Marshall, of Raymond's Buildings, Gray's Inn, to recover the sum of £300 as agreed fees and other sums for professional services and use of his office.

Sir R. Coventry, K.C., appeared for the plaintiff, and Mr. Trapnell, K.C., for the defendant.

The case for the plaintiff was that it was agreed between the parties in 1922 that the defendant should have the use of his office at a fixed rent. The parties collaborated in various ways, and then in 1927 the defendant, who was acting as architect for greyhound racing tracks at Brighton, Plymouth and Norwich, agreed to pay the plaintiff £100 in respect of each, but had never done so.

For the defence, it was denied that there was anything due in respect of the use of the office. The alleged agreement in regard to the racing tracks was also denied, and it was asserted that plaintiff had done nothing in connection with them.

Sir Reginald Coventry said the parties met in 1920 and came to some arrangement to assist each other. The plaintiff was a qualified architect, whilst the defendant, who had been in business in Liverpool as a builder and decorator, was anxious to start as an architect.

The plaintiff, giving evidence, said the idea was that they should work together on a fifty-fifty basis. Mr. Payne did some work in connection with the Brighton racing track, but the other schemes for Liverpool and Norwich fell through. The defendant never rendered him any assistance in his practice, as it would have been no use to him.

The defendant denied that he ever made any such agreement as to pay the plaintiff £100 for each of the racing tracks, and said it would have been mad to do such a thing, because the plaintiff could not have helped him. Plaintiff knew nothing about such work, and had never been on a track.

Cross-examined, defendant said he had been an architect for some years.

Sir Reginald: You were a builder. What right had you to call yourself an architect?

Defendant: A perfect right. I am a Fellow of the Incorporated Institute of Architects.

Sir Reginald: Is that what was called in Parliament a mushroom institution?

Defendant: You can call it what you like.

Sir Reginald: And does it not admit people without remuneration?

Defendant: It did not admit me without examination because I sent them my drawings. Defendant added that he was the official architect of the National Greyhounds Racing Club.

His lordship said this was an unfortunate sort of case, where two friends entered into all sorts of arrangements and then quarrelled. The only point which he had to decide, however, was whether there was any oral agreement by the defendant to pay the plaintiff £100 as a retaining fee in respect of each of the tracks, independently of any work done. He was of opinion that the plaintiff had failed to establish any such contract, and he could not see why the defendant should agree to pay the money for doing nothing in particular. Therefore, on that point there would be judgment for the defendant. The rest of the case would be referred to the official referee, though he hoped some arrangement could be arrived at.

His lordship added that if he could be of any assistance to the parties he would be very pleased to assist.

THE LAW AS TO UNITING FLOORS OF TWO BUILDINGS

Gill and another v. *Town Investments, Ltd. Chancery Division. Before Mr. Justice Maugham*

This action raised several interesting legal questions in regard to rights of sub-lessees, and his lordship's judgment settled important points of law.

The plaintiffs were Mr. A. B. Gill, Mr. R. A. Cousens and Major V. J. Dawson, and as mortgagees of a large block of property at 80 and 82 Regent Street, 17 Glasshouse Street, 11, 13 and 15 Air Street, and Quadrant Arcade, they sought as against Town Investments, Ltd., sub-lessees of the upper floors, an injunction restraining them from making any further openings in the main walls and from obstructing or preventing the plaintiffs from repairing and restoring the walls and blocking up the breaches already made. In the alternative the plaintiffs sought a mandatory order against the defendants, directing them to repair and restore the walls and block up the entrances.

Defendants by their defence denied that they had been guilty of any acts prejudicial to the buildings or that they had done anything to alter the identity of the buildings.

Mr. Vaisey, K.C., and Mr. L. Stone appeared for plaintiffs, and Mr. Gower, K.C., and Mr. C. V. Rawlence for defendants.

Mr. Vaisey stated that the defendants held a lease of the upper portion of the premises from the Equity Trust (Regent), Ltd., and the plaintiffs' complaint was that the defendants had cut the main walls of the second, third and fourth floors, and connected them with the floors of adjoining premises at Imperial House, Nos. 84 and 86 Regent Street, with the result that those floors were merged with Imperial House and had lost their identity. The defendants had sub-let certain portions of the buildings and had granted the tenants rights of ingress and egress from Regent Street, and to Air Street and Glasshouse Street. His contention was that the defendants had changed the identity of the premises and had, in his view, gone beyond their rights.

Sir Philip Pilditch, architect and surveyor, gave evidence for the plaintiffs, and also Mr. E. H. Lane (Messrs. Lane, Saville & Co.) and Mr. G. W. Rutter (Messrs. Hampton and Sons).

The plaintiffs also gave evidence that they never authorized or approved of what defendants did. The first they heard of the matter was when the transition had been effected.

For the defendants, Sir Edwin Savill was called, and spoke of the great convenience resulting from what defendants had done and the tendency it had to increase rental value. He could not conceive that any confusion would ensue on the point of identity, or that the head lessor had suffered by the acts done.

Further evidence was given for the defence by Mr. E. M. Leigh, Mr. C. F. Goddard and Mr. H. I. Rubens.

His lordship, after hearing legal arguments, said he came to the conclusion that he could not grant the injunction or the mandatory order asked for, and he dismissed the action with costs.

In the course of his judgment his lordship said although the matter was a complicated one, he took the view that the real issue was of a comparatively simple character. In 1925 there was an agreement between the Commissioners of Crown Lands and the Equity Trust, under which the Trust agreed to pull down the old building and erect a new one at a cost of £70,000, in consideration for which they were granted an eighty years' lease at a rent which, after the first two years, became £10,800 a year. The defendants had a lease of the upper floors for twenty-one years, with the option to renew for the full eighty years at £6,000 a year. The adjoining premises had the advantage of an excellent opening in Regent Street, whereas 80 and 82 Regent Street had only an entrance in Glasshouse and Air Streets. It was not surprising, therefore, that defendants desired to connect the upper floors of the buildings. It was apparent from the evidence

that there were great advantages to be derived from being able to describe the buildings as situated in Regent Street. The defendants obtained the consent of the Crown Commissioners and the London County Council to link up the two premises as they had done. The lease by the Crown to the Equity Trust Co. was after the floors had been opened to one another by defendants. Under these circumstances he took the view that the lease was a lease of 80 and 82 Regent Street, with the openings then existing, and there was no covenant in the lease to block up those openings. The Equity Trust Co. had charged their Crown lease to the plaintiffs. In his lordship's opinion there was no force in the contention of the plaintiffs that calling the upper part of the premises Imperial House would lose it its identity in the event of the defendants' lease coming to an end. He could see nothing in it disadvantageous to the plaintiffs. The main points in the action were: Could the plaintiffs insist on the openings being closed; and were they detrimental to the plaintiffs, if and when they desired to sell the premises included in the mortgage? In his opinion, though opinions differed, it was better to have the openings for some years than never to have had them at all, and in his view they were not detrimental to the plaintiffs.

DRAINAGE WORK

Smith v. *Lyons. King's Bench Division. Before the Lord Chief Justice and Justices Acton and Branson*

This appeal, by way of case stated, raised the point as to the liability for the repair of drainage. The magistrate at Old Street held that certain pipes carrying drainage from certain premises in Parnell Road, Poplar, were a sewer, repairable by the Poplar Borough Council, and not a drain repairable by the owner of the house, Mr. J. Lyons.

Mr. J. Hodson, for the appellant, who is the sanitary inspector of the Poplar Borough Council, said his case was that the respondent had neglected to comply with an order requiring him to do certain work to the drain of No. 138 Parnell Road, the house in question, which also took the drainage of other houses. A scheme of combined drainage was approved by the local authority in 1866, but subsequently other houses were added to the scheme. There had been proceedings in regard to the drain at No. 140, and it had been held that that was a sewer, and the Council had reconstructed it on that footing. Before the magistrate, for Mr. Lyons, it was contended that he was not liable for the work, on the ground that there had been a material alteration in his drainage scheme approved in 1866, and further, that the drain of No. 140 was indistinguishable from respondent's house. The magistrate took this view also. Counsel argued that what was done at No. 140 could not affect the position of the drain of respondent's house, and that the magistrate was wrong in dismissing the information.

The Lord Chief Justice, in giving judgment, upheld the respondent's contention in the Court below, and said if a line of pipes, which at first blush appeared to be a sewer, were to be taken out of the original category, and for the purposes of the legislation concerned regarded as a drain, it must be shown that the work had been carried out in accordance with the plan approved by the local authority. Here, what was carried out was, as a matter of fact, something quite different.

The Court dismissed the appeal with costs, without calling upon Mr. T. F. Davis for the respondent.

Justices Acton and Branson concurred.

COMPETITIONS OPEN

July 17.—Buildings for a street improvement scheme. Assessor: George Drysdale, F.R.I.B.A. Premiums: 50 guineas and 20 guineas. Conditions, etc., obtainable from the Borough Surveyor, Council House, Walsall, until July 17. (Deposit £1 1s.)

July 31.—Sending-in day. Proposed Nurses' Home at the Royal Asylum, Montrose. Limited to architects practising in the counties of Aberdeen, Angus, Fife, Kincardine and Perth. Assessor: John Watson, F.R.I.B.A. Premiums: £75, £50 and £25. Conditions, etc., obtainable from C. K. Alexander, Clerk and Treasurer, Royal Asylum, Montrose.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1 Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, JULY 1

R.I.B.A., 9 Conduit Street, W.1. Exhibition of designs submitted in the Rome Scholarship Competition. Until July 4.

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Fourth of five lectures on the Art of Making and Using Concrete. "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I.STRUCT.E. 6.30 to 9.30 p.m. Also a demonstration of the mixing, placing, and ramming of concrete will be given at the L.C.C. School of Building, Ferndale Road, Brixton, by H. A. Holt. 2.30 to 5.30 p.m. **2.30 p.m.**

THURSDAY, JULY 2

MARGATE SCHOOL OF ART. Tenth of twelve lectures on Beauty in Design. "Town Planning." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

BARTLETT SCHOOL OF ARCHITECTURE. University of London, University College, Gower Street, W.C.1. Opening of the Exhibition of Students' Work.

SATURDAY, JULY 4

Sunrise 4.47 a.m. Sunset 9.19 p.m.

R.I.B.A., 9 Conduit Street, W.1. Latest date for submission of applications for the maintenance scholarships in architecture.

LIVERPOOL SCHOOL OF ARCHITECTURE. At the Old Blue Coat Buildings, Liverpool. Annual Exhibition of Architectural Drawings to be opened by the Rt. Hon. Arthur Greenwood, P.C., M.P., at 4 p.m. Chairman: The Rt. Rev. the Lord Bishop of Liverpool. Until Saturday, July 18. 10 a.m. to 6 p.m. **4 p.m.**

ROYAL SANITARY INSTITUTE. Forty-second Congress to be held at Glasgow. Until July 11. Papers to be read will include the following: "Architecture and Engineering"; "Hospitals—Planning and Construction"; "Discharge of Sewage into Sea"; "Housing"; "Slum Clearances"; and "Single-Pipe Drainage."

NATIONAL LABOUR HOUSING ASSOCIATION. Housing and Slum Clearance Conference, to be held at the Memorial Hall, Farringdon Street, E.C.

WEDNESDAY, JULY 8

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Last of five lectures on the Art of Making and Using Concrete: "The Mechanical Appliances for the handling of concrete on the Job." By Lt.-Colonel R. A. B. Smith, M.I STRUCT.E. **6 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE. Annual Provincial Meeting to be held at Great Yarmouth.

THURSDAY, JULY 9

MARGATE SCHOOL OF ART. Eleventh of twelve lectures on Beauty in Design: "Hygiene and Acoustics." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, JULY 10

ARCHITECTURAL ASSOCIATION. 34 Bedford Square, W.C.1. Opening of the Exhibition of Students' Work

NATIONAL HOUSING AND TOWN PLANNING COUNCIL. Conference to be held at the County Hall, Westminster Bridge Road, S.E.1.

SATURDAY, JULY 11

Sunrise, 4.55 a.m. Sunset, 9.15 p.m.

MONDAY, JULY 13

INSTITUTION OF MECHANICAL ENGINEERS. Summer Meeting to be held at Cambridge.

THURSDAY, JULY 16

MARGATE SCHOOL OF ART. Last of twelve lectures on Beauty in Design. "Illumination and Colour." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, JULY 17

DESIGN AND INDUSTRIES ASSOCIATION. Short Cruise to Norway, returning July 24.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual Exhibition to be held at Winchester.

SATURDAY, JULY 18

Sunrise, 5.2 p.m. Sunset, 9.9 a.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Visit to the neighbourhood of Guildford by the Brighton and Guildford Chapters.

ARCHITECTS' WILLS

Mr. George Daniel Stevenson, A.R.I.B.A., of London, left £1,366 (net personalty £412).

Mr. Edward Smith, retired architect and surveyor, of Mundesley, Norfolk, left £4,026 (net personalty £2,407).

Mr. Owen Carey Little, F.R.I.B.A., of London, left £5,034 (net personalty £4,972).

TRADE NOTES

Miss Muriel Angelus, the British film star, performed the opening ceremony, on June 17, of the new theatre constructed by Holophane, Ltd., at their premises, Elverton Street, Westminster, for the sole purpose of demonstrating their colour-lighting system.

Mr. H. Hepworth Thompson, managing director, who presided, said that the progress made in colour-lighting by the firm had made necessary the new theatre. He stressed the fact that the colour system was of British origin, and the equipment had been designed and constructed by their own engineers in their own factories: in short, it was an all-British system. He thought he was safe in stating that nowhere in the world today could they find a purer colour and a higher intensity of light at so low a first cost and current expenditure, quite apart from the fact that the system introduced a new technique into the art of stage production. That was an important point, because colour was being increasingly employed in stage and cinema productions.

Mr. R. Gillespie Williams, chief colour consultant to Holophane, Ltd., and the inventor of the system, then demonstrated the various effects. Many changes, alike in the design of curtains, scenic effects and dresses, solely by the application of colour-lighting, were shown. Other effects included a dance of coloured shadows, and the use of the cyclorama, with colour changes, for the presentation of open-air scenes. Mr. Williams also demonstrated how the colour-lighting system could be utilized in changing interior design and decoration.

Mr. Alister Macdonald, A.R.I.B.A., who was present, afterwards expressed great interest in the demonstration, which, he said, showed the enormous possibility of colour-lighting as applied to architecture. "I was amazed," he said, "at the extraordinarily good effects produced by a British firm, because one had got used to the idea that most of the best developments in the theatre came from foreign sources. The subject of colour-lighting is of growing importance, and should be studied by architects and all those interested in the stage and cinema."

The theatre was erected by Mullen and Lumsden, Ltd., and the electrical installation was carried out by the Etna Lighting and Heating Co.

It is interesting to note that Holophane, Ltd., are now equipping cinemas and theatres on the Continent and in the Empire, so that it may be said that this is a new British export trade.

*

Messrs. Croggon & Co., Ltd., of 230 Upper Thames Street, London, E.C.4, who are now engaged upon the manufacture of builders' ironwork, staircase, balustrading, balcony railing, etc., have issued a catalogue of wrought-iron fencing railings and gates. The firm manufacture and supply fencing for all purposes; wrought railings and gates can be made in their workshops exactly to architects' designs and specifications or from drawings prepared by the firm's draughtsmen to meet the requirements of clients, for building schemes, estates, public parks institutions, etc.

*

Maftex Building Board is the subject of a new leaflet just issued by Messrs. MacAndrews and Forbes, Limited, of Bush House, Aldwych, London, W.C.2. The firm remind the reader that conservation of heat in winter and exclusion of heat in summer—retarding of condensation—sound-deadening that absorbs and smothers the transmission of room-to-room noises—all are important factors in the construction of modern buildings, and state that all can be obtained by the use of Maftex—the four-in-one board that is said to combine insulation, boarding, plaster base and sound deadening—at no increase in cost over modern uninsulated construction. Maftex is claimed to be of single-ply construction, easily handled, quickly installed, and economical in cost; it is also claimed that it is moisture-proof, is not attacked by rats or vermin, and does not mould nor disintegrate. Among the more important users of Maftex are The British Broadcasting Corporation, The British International Pictures, Ltd., Elstree, Bush House, Ltd., Works Department, J. Lyons & Co., Ltd., Architect's Office, Port of Manchester Warehouses, Ltd., Universum Film Company (U.F.A.), Neu Babelsberg, near Berlin, Trafford Park Estates, Ltd., Works Department, Manchester, Halifax Building Society, Birkenhead, University of Leeds.

The new theatre of Messrs. Holophane, Ltd., designed by Robert Atkinson at their premises in Elverton Street, Westminster, S.W.1. It has been constructed for the sole purpose of demonstrating their colour-lighting system.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Extension to the Bedford College for Women (pages 7–10). General contractors, F. and H. F. Higgs, Ltd., who were also responsible for the stonework and Portland stone. Consulting engineer, Sir E. Owen Williams; heating engineers, Dobby and Williamson; electrical consulting engineers, Merz and McLellan. Sub-contractors: J. Jeffreys & Co., Ltd., heating installation; Roger Field and Bean, consulting engineers for the drains and all sanitary fittings; Drake and Gorham, Ltd., electrical work, including electric stoves; Elvin, demolition of old house on site; Dugdill & Co., electric hand lamps; Hawksley, "Everyway" electric lamps; Baird and Tatlock (London), Ltd., laboratory fittings; Henry Hope and Sons, Ltd., windows and steel casements; Eric Mundy, foundation stone and plaque; Synchronome Co., Ltd., electric clocks and bells; Hammer & Co., Ltd., chairs in hall; Bennet Furnishing Co., Ltd., blinds, lanterns, screens, etc.

Whaley Thorns School (pages 11–13). General contractors, J. Harvey. Sub-contractors: Jerram & Co., heating apparatus; Granwood Flooring Co., Ltd., floors.

Cricket Pavilion, Mill Hill School (page 14). General contractor, N. C. Wade. Sub-contractors: Dent and Hellyer, Ltd., sanitary goods; W. P. Lamb, tiles and bricks.

Old Millhillians Rugby Football Pavilion, Headstone Lane, Mill Hill (page 14). General contractors, J. and J. Dean. Sub-contractors: London Brick Co. and Forders, Ltd., and Colliers, bricks; Colliers, tiles; Stuart's Granolithic Co., Ltd., and Art Pavements and Decorations, Ltd., patent flooring; Stourbridge Glazed Brick and Fireclay Co., sanitary fittings; Thames Board Mills, Ltd., Essex wallboard.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

In connection with the proposal for the reconstruction of CHELSEA Bridge the L.C.C. Improvements Committee recommends that the new bridge shall be of the suspension type, of steel construction and with a width of ninety-eight feet.

The CROYDON Corporation is to erect four blocks at the mental hospital, at an estimated cost of £64,000.

The CROYDON Corporation recommends approval of plans prepared by Mr. Henry Berney and Mr. Macintosh for extensions at the town hall, at an estimated cost of £75,000.

Plans passed by the CROYDON Corporation: Twenty houses, Isham Road, for Messrs. Truett and Steel, Ltd.; six shops, High Street, for Messrs. North, Robin and Wilsdon; nine houses, Beckford Road, for Mr. P. Richardson; milk depot, Brighton Road, for Mr. E. Bates; alterations and additions, Bridge Hotel, West Croydon, for Messrs. Williams, Holliday and Partners; six houses, Crest Road, and forty-five garages, Croham Valley Road, for Mr. G. W. Peachey; eighteen houses, Grange Road, for Mr. P. Richardson; six shops, Mitcham Road, for Mr. H. Macintosh; eight bungalows, Meadway, for Messrs. Bethell and Swannell; additions, Children's Homes, Pawsons Road, for Messrs. H. Berney and Son; six houses, Park Road, for Mr. J. Mantell; alterations and additions, 80 High Street, for Mr. H. Williams; six houses, Davison Road, for Mr. J. Flitten; eleven houses, Beauchamp Road, for Mr. J. D. Calcott; seven shops, Grand Parade, High Street, for Messrs. Grace and Marsh, Ltd.; alterations and additions, Railway Hotel, East Croydon, for Messrs. Murray, Delves, Murray and Atkins; additions, Old Palace School, Old Palace Road, for Messrs Rees and Partners; six houses, Croham Valley Road, for Mr. G. W. Peachey.

The L.C.C. Education Committee has approved plans for remodelling and enlarging the North End Road school, FULHAM, at an estimated cost of £15,000.

Mr. A. G. Johnson has prepared plans for the reconstruction of 472A, Fulham Road, FULHAM, for Lloyds Bank, Ltd.

The L.C.C. Education Committee is to erect a new elementary school on the Mount Pleasant Lane site, HACKNEY, at a cost of £24,000.

The Marquess of Northampton is to redevelop property in Sebbon Street, ISLINGTON.

Plans passed by the LEWISHAM B.C.: Revised plans for rebuilding "Prince of Wales" public-house, Perry Rise, for Messrs. Charrington & Co., Ltd.; streets off Marvels Lane, Lee, for Mr. J. E. James; fifty-two houses, Coopers Lane and Burnt Ash Hill, for Mr. W. J. Brise; four houses, Honor Oak Road, for Messrs. William Wilmot, Ltd.; transformer station, Catford Hill, for Messrs. T. H. Sawyer and Son, Ltd.

SOUTHERN COUNTIES

The HERNE BAY U.D.C. has under consideration the layout of a new housing site in the Claremont Street district.

The Surrey C.C. has obtained sanction to borrow £49,670 for extensions at the NETHERNE mental institution.

The NORTHFLEET U.D.C. has approved the plans of the surveyor for the erection of 134 houses on the Wombwell Park estate.

The WOKING U.D.C. is to erect thirty-six houses on the Victoria Road site, Knaphill.

SOUTH-WESTERN COUNTIES

The BRISTOL Corporation is to erect 157 workmen's dwellings to accommodate persons displaced through the widening of Hotwell Road and the construction of the new road from Victoria Street to Stokes Croft.

Mr. E. H. Ladbury, architect, is to develop an estate in Marldon Road, PAIGNTON.

Plans passed by the PAIGNTON U.D.C.: Four bungalows, Totnes Road, for Mr. J. A. Maunder; three houses, Fisher Street, for Messrs. Knapman Bros.; two houses, Roundham Road, for Mr. R. D. Brayshaw; two houses, Winsu Avenue, for Mr. F. Brooksbank; estate development, Marldon Road, for Messrs. Eastley & Co.; two houses, Blatchcombe Road, for Mr. S. P. Madge; layout for eighty-eight building sites, Marldon Road, for Mr. A. Langler; layout for ninety-eight houses, Clifton Road, for Messrs. Couldrey; five houses, Clifton Road, for Messrs. R. H. Peeke and Son.

The TORQUAY Corporation is to acquire a site in Hele Road, for the erection of sixteen houses.

The TORQUAY branch of the National Council of Women has purchased dilapidated property in Torquay for demolition and proposes the erection of new buildings on the sites.

Plans passed by the TORQUAY Corporation: Two houses, Burridge Road, for Mr. C. L. Wollacott; two houses, Burridge Road, for Chelston Building Co.; two houses, Teignmouth Road, for Mr. Steer; fourteen houses, Hill Park Road, Upton, for Messrs. H. Lloyd and Son; three bungalows, Newton Road, for Mr. H. Pearce; amusement hall, Torwood Street, for Amusement Parks, Ltd.; four houses, Reeves Road, for Mr. P. D. Cavanna; five houses, Homestead Road, for Messrs. J. Lloyd and Son; eight houses, Marcombe Road, for Mr. E. Riggs.

MIDLAND COUNTIES

The BASFORD R.D.C. is to erect twenty houses in the Ruddington parish.

Plans passed by the BEDFORD Corporation: Dairy, Southville Road, four houses, Goldington Road, grain store, St. Leonards Street, two houses, Elstow Road, and social hall, Ford End Road, for Messrs. E. H. C. Inskip and Son; eight houses, Nelson Street, for Mr. G. J. Tucker; rebuilding "Bedford Arms" public-house, Bromham Road, for Messrs. Usher and Anthony.

The CHESTERFIELD Corporation is to erect forty-six houses in Newbridge Lane, nine houses for aged couples in Dickinson Road, nine houses in Hasland Road, and is to prepare a rehousing scheme for the Whitebank Yard clearance area.

Plans passed by the CHESTERFIELD Corporation: Two bungalows, Brookside estate, for Mr. A. E. Herring; two houses, Derby Road, for Mr. J. Jones; two houses, James Street, for Messrs. Clarke Bros.; warehouse extension, Queen Street, for Messrs. Shentall, Ltd.; pavilion, Highfield Sports Ground, for Wagon Repairs, Ltd.; shops, Chatsworth Road, for Messrs. F. C. Lowe and Sons; two houses, Rhodes Avenue, for Mr. A. Needham; two houses, Devonshire Avenue, for Mr. R. McCourt; warehouse, Portland Works, for Messrs. Robinson and Sons, Ltd.

The DERBY Corporation has purchased Humbledon Farm for a housing site. It is proposed to build about 2,000 houses.

The ILKESTON Corporation is to erect an additional eighteen houses on the northern housing estate.

The MANSFIELD WOODHOUSE U.D.C. is to erect twenty-two houses for aged people, at a total cost of £4,850.

The Leicestershire Education Committee is acquiring a site at MARKET HARBOROUGH for the erection of a senior school.

The MARKET HARBOROUGH U.D.C. has acquired six acres of land for a housing scheme.

The OXFORD Corporation has obtained sanction to borrow £63,000 for the erection of 160 houses at Cutteslowe.

Plans passed by OXFORD Corporation: Laundry extensions, Sunnymeade, for French Laundry, Ltd.; two houses, Ferry Road, New Marston, for Mr. F. Watts; workshop, William Street, New Marston, for Mr. L. E. Papel; shop, Cinnaminto Road, for Mr. W. D. Smith; warehouse, Brewers Street, for Messrs. G. R. Cooper, Ltd.; new buildings at Lady Margaret Hall, for the trustees.

The WALSALL Corporation is to extend the isolation hospital, at a cost of £14,500.

The WALSALL Corporation is to enlarge the sanatorium at GOSCOTE, at a cost of £17,500.

The governors of the Royal Orphanage, WOLVERHAMPTON, are to erect a junior school from plans prepared by Messrs. Joseph and H. E. Lavender.

NORTHERN COUNTIES

Messrs. W. and M. W. Shennon are to erect a temporary church for the Rev. W. Hopwood in Egan Road, BIRKENHEAD.

Messrs. Woolfall and Eccles have prepared plans for the conversion of premises into a nurses' home in Park Road, BIRKENHEAD, for the Birkenhead General Hospital.

Mr. Stephen Wilkinson, the Lancashire county architect, has prepared plans for extensions at the HIGH CARLEY sanatorium, near Ulverston.

H.M. Office of Works is to erect a telephone exchange at Failsworth, MANCHESTER.

The PENRITH U.D.C. is purchasing a site at Penny Hill for a housing scheme.

The STRETFORD U.D.C. is considering a clearance scheme for the Clifford ward area.

The STRETFORD U.D.C. has obtained sanction to borrow £6,650 for the erection of wash-houses at Old Trafford.

Plans passed by STRETFORD U.D.C.: Two houses, Hillingdon Road, for Messrs. Littler and Rich; church and school, Derbyshire Lane, for the Moss Park Wesleyan trustees; public wash-house, Carriage Street, for the U.D.C.; works extensions, Ayres Road, for the National Corrugated Paper Co., Ltd.; brass-foundry extensions, Westinghouse Road, for Metro-Vickers Electrical Co., Ltd.; six houses, Seymour Grove, for Messrs. Smith and Allcock, Ltd.

Plans passed by the TYNEMOUTH Corporation: Alterations, St. Oswald's Mission, Stephenson Street, for Mr. W. Stockdale; two houses, Hawkeys Lane, for Messrs. F. R. N. Haswell and Son.

The WAKEFIELD Corporation is to erect twenty houses on the Lupset estate, by direct labour, at an estimated cost of £9,000.

The WAKEFIELD Corporation has decided to improve the baths in Almshouse Lane and erect an additional swimming bath, at a cost not exceeding £20,000.

WALES

The Swansea Education Committee has approved plans for the erection of an elementary school at COCKETT, at an estimated cost of £17,598.

The SWANSEA Corporation has decided to proceed with the erection of a branch library at Oystermouth, by direct labour.

Mr. S. Davies, builder, is to erect 140 houses on the Cockett Farm estate, SWANSEA.

The SWANSEA Corporation is to further develop the Sketty Park estate by the erection of about 200 houses.

Plans passed by the SWANSEA Corporation: Institute, Danygraig Terrace, for trustees of Mount Calvary Baptist Church; rebuilding 143 Clundy Street, for Mr. W. Williams; two houses, Lon Masarn, Tycoch, for Mr. I. J. Aubrey.

SCOTLAND

Mr. Andrew Aitkan is to erect eighteen houses in Cernworth Avenue, Newlands, GLASGOW.

Plans passed by the GLASGOW Corporation: Hall, Dalveen Street, for Mr. Alex Allan, Jr.; building, Spencer Street, Anniesland, for Messrs. Collars, Ltd.; church, Cumbernauld Road, Riddrie, for the Roman Catholic Archdiocese of Glasgow; premises, corner of Great Western Road and Fulton Street, Knightswood, for the British Linen Bank.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton ..	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Welling-borough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . "	1 8
Joiner . . . . "	1 8
Machinist . . . . "	1 9
Mason (Banker) . . . . "	1 8
" (Fixer) . . . . "	1 9
Plumber . . . . "	1 8
Painter . . . . "	1 7
Paperhanger . . . . "	1 8
Glazier . . . . "	1 8
Slater . . . . "	1 8
Scaffolder . . . . "	1 4
Timberman . . . . "	1 4
Navvy . . . . "	1 3
General Labourer . . . . "	1 3
Lorryman . . . . "	1 5½
Crane Driver . . . . "	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . "	2 10 6
Hydrated Lime . . . "	2 16 0
Portland Cement . . . "	2 6 0
Rapid Hardening Cement . . "	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . "	10 0
Building Sand . . . "	10 6
Washed Sand . . . "	11 6
2" Broken Brick . . . "	9 6
¾" " " . . . "	12 6
Pan Breeze . . . "	6 6
Coke Breeze . . . "	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . "	6 3	7 2
Rest bends . . . "	5 9	8 9
Single junctions . . . "	3 9	5 9
Double " . . . "	5 9	8 9
Straight channels . . . "	2 6	3 2
¾" Channel bends . . . "	7 8	—
Channel junctions . . . "	7 0	12 6
Channel tapers . . . "	5 6	7 9
Yard gullies . . . "	9 6	11 6
Interceptors . . . "	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . . "	15 3	24 0
Single junctions . . . "	9 3	18 0
Double junctions . . . "	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . "	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . "	3 3 6
Stocks, 1st Quality . . . "	4 18 6
" 2nd " . . . "	4 12 6
Blue Bricks, Pressed . . . "	9 18 0
" Wirecuts . . . "	8 16 0
" Brindles . . . "	8 0 0
" Bullnose . . . "	10 8 0
Red Sand-faced Facings . . "	7 11 0
Red Rubbers for Arches . . "	15 0 0
Multicoloured Facings . . "	9 4 0
Luton Facings . . . "	8 16 0
Midhurst White Facings . . "	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . "	21 10 0
Headers . . . "	21 0 0
Bullnose . . . "	28 0 0
Double Stretchers . . . "	30 0 0
Double Headers . . . "	27 0 0
Glazed Second Quality, *Less* . "	1 0 0
" Buffs and Creams, Add . "	2 0 0
" Other Colours " . "	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" " " " " . "	2 0
3" " " " " . "	2 3
4" " " " " . "	3 0

MASON

	s. d.
The following d/d F.O.R. at Nine Elms:	
Portland stone, Whitbed . . . F.C.	4 6
" Basebed . . . "	4 9
Bath stone . . . . "	2 11
York stone . . . . "	6 9
" Sawn templates . . . "	7 6
" Paving, 2" . . . F.S.	1 8
" " 3" . . . "	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . "	28 0 0
20" × 10" Countesses . . "	20 5 0
18" × 10" Viscountesses . . "	17 0 0
18" × 9" Ladies . . . "	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
" green . . "	27 15 0
Best machine roofing tiles . . "	5 0 0
Best hand-made do. . . . "	5 10 0
Hips and valleys . . . each	9½
" hand-made . . . "	10
Nails, compo . . . . lb.	4
" copper . . . . "	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . " "	5
" " 2nds . . " "	4
Mahogany, Honduras . . " "	1 3
" African . . " "	1 1
" Cuban . . " "	2 6
Oak, plain American . . " "	1 0
" Figured " . . " "	1 3
" Plain Japanese . . " "	1 2
" Figured " . . " "	1 5
" Austrian wainscot . . " "	1 6
" English " . . " "	1 11
Pine, Yellow . . . " "	1 0
" Oregon . . . " "	4
" British Columbian . . " "	4
Teak, Moulmein . . . " "	1 3
" Burma . . . " "	1 2
Walnut, American . . . " "	2 3
" French . . . " "	2 3
Whitewood, American . . " "	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
" ¾" . . . "	1 3 6
" 1" . . . "	1 5 6
" 1¼" . . . "	1 11 0
" 1½" . . . "	1 15 0
Deal matchings, ¾" . . . "	16 0
" ¾" . . . "	17 6
" 1" . . . "	1 6 0
Rough boarding, ¾" . . . "	18 0
" 1" . . . "	1 0 0
" 1¼" . . . "	1 8 0

Plywood, per ft. sup.

Thickness	¼"	½"	¾"	1"	1¼"	1½"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6		
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6		
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –		
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –		
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –		
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –		

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10	
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9	
" 3"–11½" long "	7	9	1/3	1/8	3/–	
Long screws, 12"–23½" long "	11	1/3	2/2	2/10	5/3	
" " 3"–11½" long "	8	10	1/5	1/11	3/6	
Bends . . "	8	11	1/7½	2/7½	5/2	
Springs not socketed "	5	7	1/1½	1/11½	3/11	
Socket unions . "	2/–	3/–	5/6	6/9	10/–	
Elbows, square . "	10	1/1	1/6	2/2	4/3	
Tees . . "	1/–	1/3	1/10	2/6	5/1	
Crosses . . "	2/2	2/9	4/1	5/6	10/6	
Plain sockets and nipples "	3	4	5	8	1/3	
Diminished sockets "	4	6	9	1/–	2/–	
Flanges . . "	9	1/–	1/4	1/9	2/9	
Caps . . "	3½	5	8	1/–	2/–	
Backnuts . . "	2	3	5	6	1/1	
Iron main cocks . "	1/6	2/3	4/2	5/4	11/6	
" " with brass plugs "	—	4/–	7/6	10/–	21/–	

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	" water .	45
Steam . .	55	" steam .	40

FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	" water .	42½
Steam . . .	47½	" steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . "	10 0
" " ½" . . . "	9 9
" " ⅝" . . . "	9 6
" " ¾" . . . "	9 0
" " ⅞" . . . "	9 0
" " 1" . . . "	9 0
" " 1¼" . . . "	9 0
" " 1½" . . . "	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . . "	5 0	8 6
Boots . . . . "	3 3	4 6
Bends . . . . "	2 9	4 0
" with access door . . "	—	6 9
Heads . . . . "	4 0	5 0
Swan-necks up to 9" offsets . "	4 0	6 3
Plinth bends, 4½" to 6" . "	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . "	1 7	1 11
Obtuse angles . . . "	2 0	2 6
Outlets . . . . "	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	19 0
" drawn pipes . . . "	19 6
" soil pipe . . . "	22 6
" scrap . . . "	9 0
Solder, plumbers' . . . lb.	11
" fine do. . . . "	1 3
Copper, sheet . . . "	1 0
" tubes . . . "	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . "	1 1	1 3	2 8
Galvanized . . "	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . "	3 9	5 3	10 3
Shoes . . . "	2 10	4 4	9 6
Heads . . . "	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . "	2 10 6
" fine . . . "	5 10 0
Hydrated lime . . . "	2 16 0
Sirapite . . . . "	3 10 0
Keene's cement . . . "	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
" rent . . . "	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
" " 26 oz. . . "		4½
Arctic glass . . . "		5
Cathedral glass . . . "		6
Hartley's rough rolled . "		9
Do. wired plate . . . "		1 3
¼" Polished plate, n/e 1 . "	1 0 to	1 3
" " 2 . "	1 2 "	1 7
" " 3 . "	1 7 "	2 5
" " 4 . "	2 1 "	2 11
" " 6 . "	2 3 "	3 2
" " 8 . "	2 6 "	3 6
" " 12 . "	2 9 "	3 8
" " 20 . "	3 0 "	3 11
" " 45 . "	3 3 "	4 1
" " 65 . "	3 7 "	4 6
" " 90 . "	3 10 "	4 9
" " 100 . "	4 0 "	5 0
Vita glass, sheet, n/e 1 . "		1 0
" " 2 . "		1 3
" " over 2 . "		1 9
" " plate, n/e 1 . "		1 6
" " " 2 . "		3 0
" " " 5 . "		4 0
" " " 7 . "		5 0
" " " 15 . "		6 0
" " "over 15 . "		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . "	4 3
Turpentine . . . . "	3 8
Patent knotting . . . "	14 0
Distemper, washable . . cwt.	3 0 0
" ordinary . . . "	2 5 0
Whitening . . . . "	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . "	14 0
Outside varnish . . . "	16 0
White enamel . . . "	1 15 0
Ready-mixed paint . . "	13 6
Brunswick black . . . "	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add "	3	0
If in underpinning	" "	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do., all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"		2 1	6
1½" " " " "	"		2 7	6
¾" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*		s.	d.
1¼" deal moulded sashes of average size	F.S.	2	3
2" " " "	"	2	6
1¼" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1¼" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1¼" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1¼" deal moulded wall strings	"	2	6
1¼" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1¼" × 1¼" " "	"	3	3
3" × 1" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	15	6
Do. in flashings	"	1	18	0
Do. in covering to turrets, etc.	"	2	5	0
Do. in soakers	"	1	11	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

	½" s.	d.	¾" s.	d.	1" s.	d.	1¼" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks "	—		—		—		—		—		5	9
Extra, only to bends Each	—		—		—		—		2	3	6	6
Do. to stop ends "	7		9		1	0	1	3	2	0	—	
Boiler screws and unions "	3	6	4	0	5	6	8	0	—		—	
Lead traps "	—		—		—		7	6	10	6	—	
Screw down bib valves "	7	6	10	6	12	6	—		—		—	
Do. stop cocks "	10	0	12	0	16	0	23	6	56	6	—	

	£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	3	0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6
Extra, only for shoes	Each	2	6
Do. for plain heads	"	5	6

PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

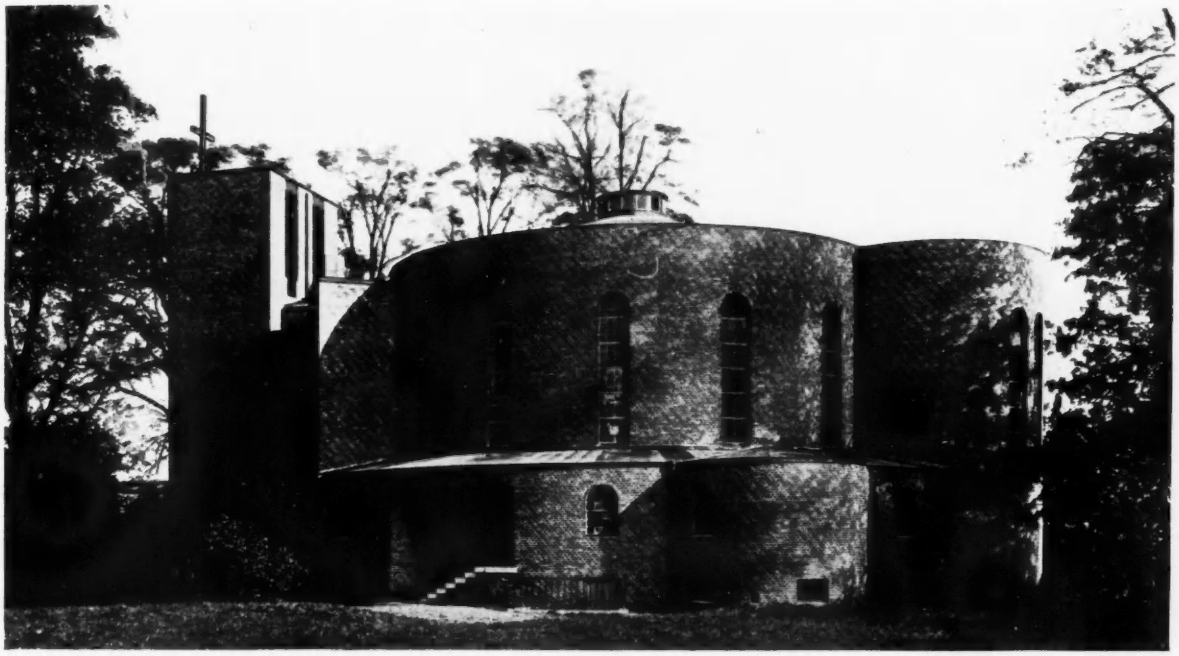
GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

CHURCH OF CYLINDRICAL FORM

FROM ABROAD

CONCRETE LAMP-POST ON A BRIDGE



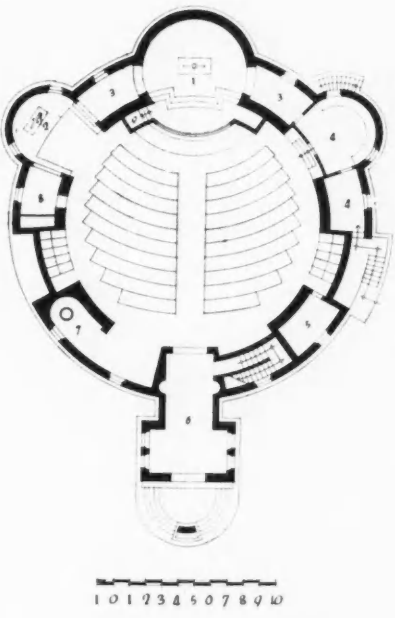
[*Professor Clemens Holzmeister, Architect.*

THE CATHOLIC CHURCH OF MARIA GRÜN AT BLANKENSEE, NEAR HAMBURG

THE church is cylindrical in form and is built of red bricks, the patterning of which is indicated in the photograph given above. It is situated in a residential quarter of the town, standing in the midst of a public park, so that it can be seen from all parts.

Below is the ground plan, in which the following are the references :

(1) High Altar.
(2) Side Altar.
(3) Oratory.
(4) Sacristy.
(5) Vestry.
(6) Vestibule.
(7) Baptistry.
(8) Confessional.
(9) Pulpit.



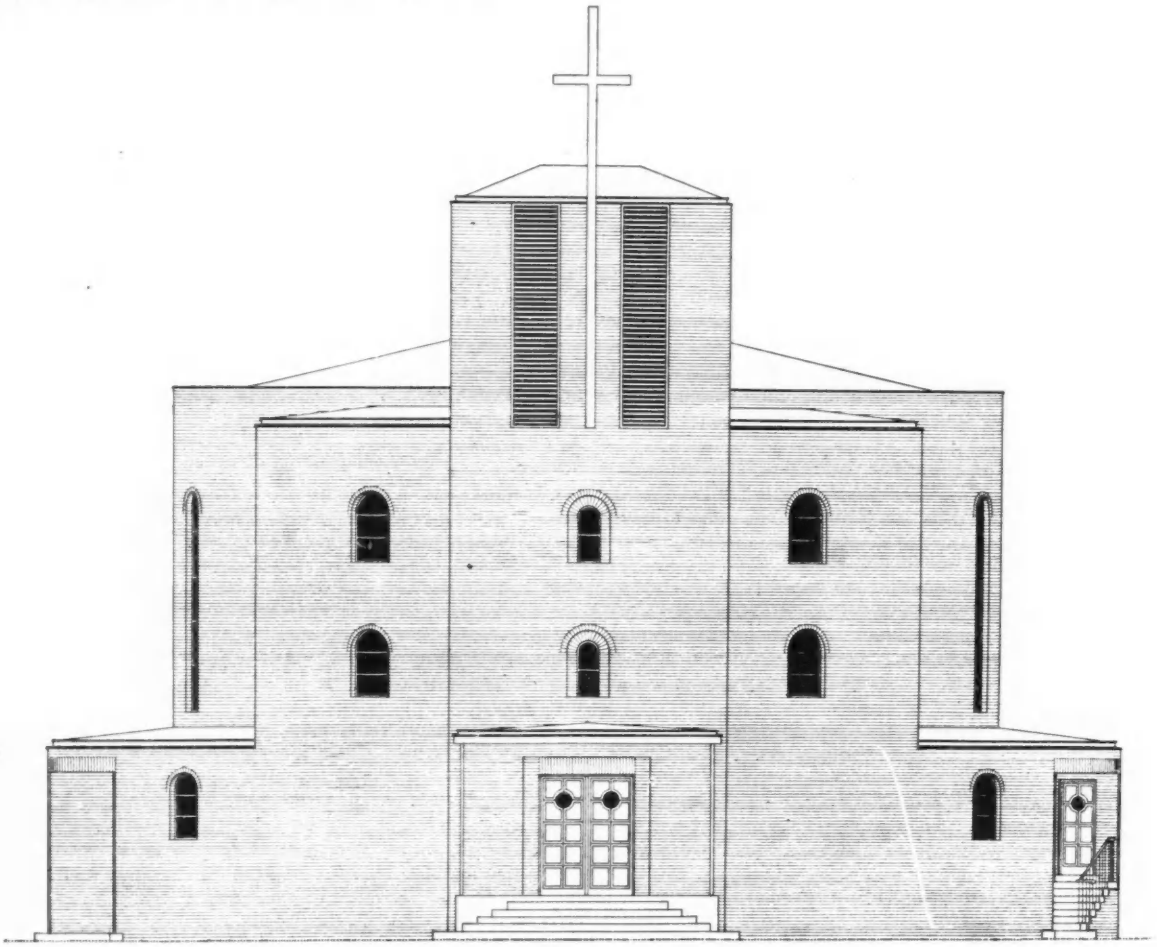
1 0 1 2 3 4 5 6 7 8 9 10

THE PLAN

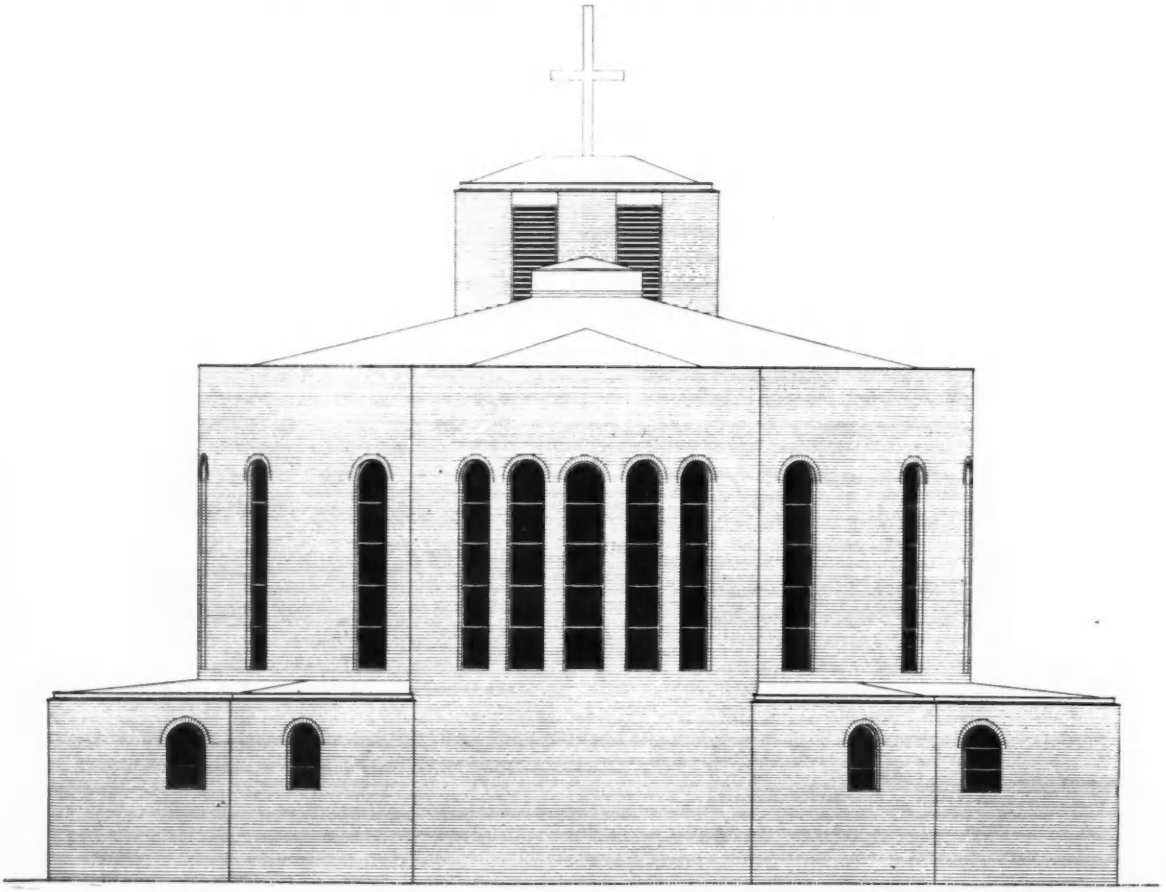
With the exception of the pulpit, all these have their place in portioned-off niches, and all are panelled to the full extent of their height in walnut wood.

Choir and organ are reached by stairs leading from the vestibule, in part filling the interior of the tower. Inside, the church is finished in white stucco.

Drawings of the front and back elevations of the building are reproduced overleaf.



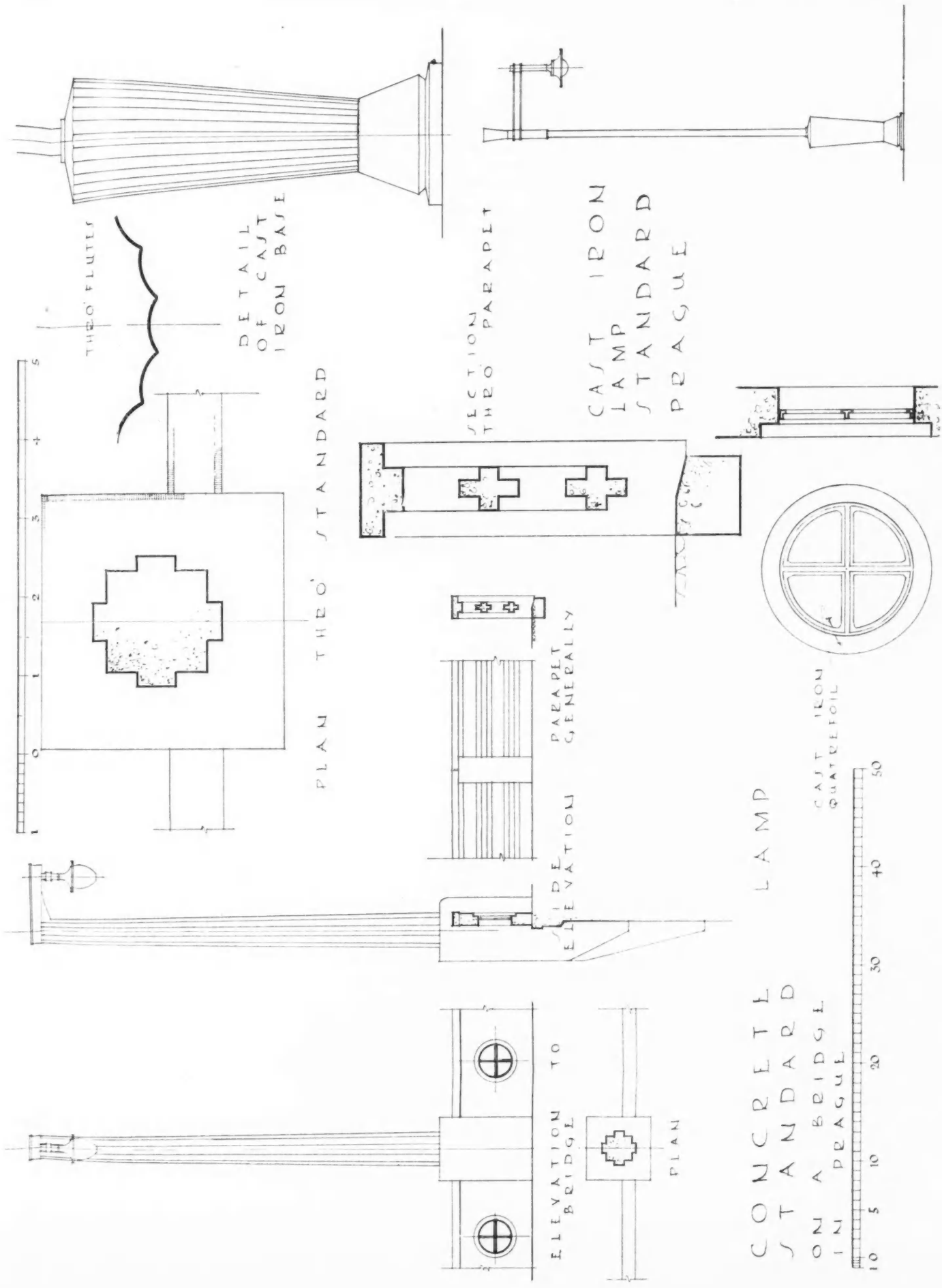
CHURCH AT BLANKENSEE: THE FRONT ELEVATION



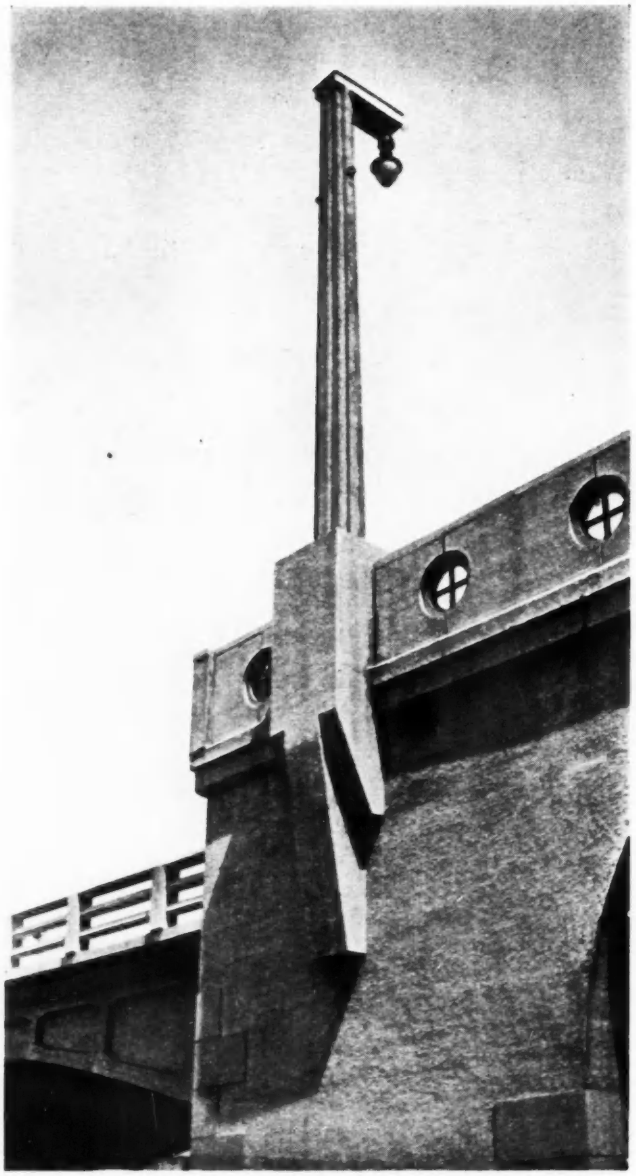
[*Professor Clemens Holzmeister, Architect.*

CHURCH AT BLANKENSEE: THE BACK ELEVATION

For photograph and a description see preceding page.



For photograph and a description see following page.



CONCRETE LAMP-POST ON A PRAGUE BRIDGE

THE bridge on which stands the lamp-post illustrated above spans the River Vltava, on the outskirts of Prague, the capital of Czechoslovakia, giving access therefrom to a modern suburb.

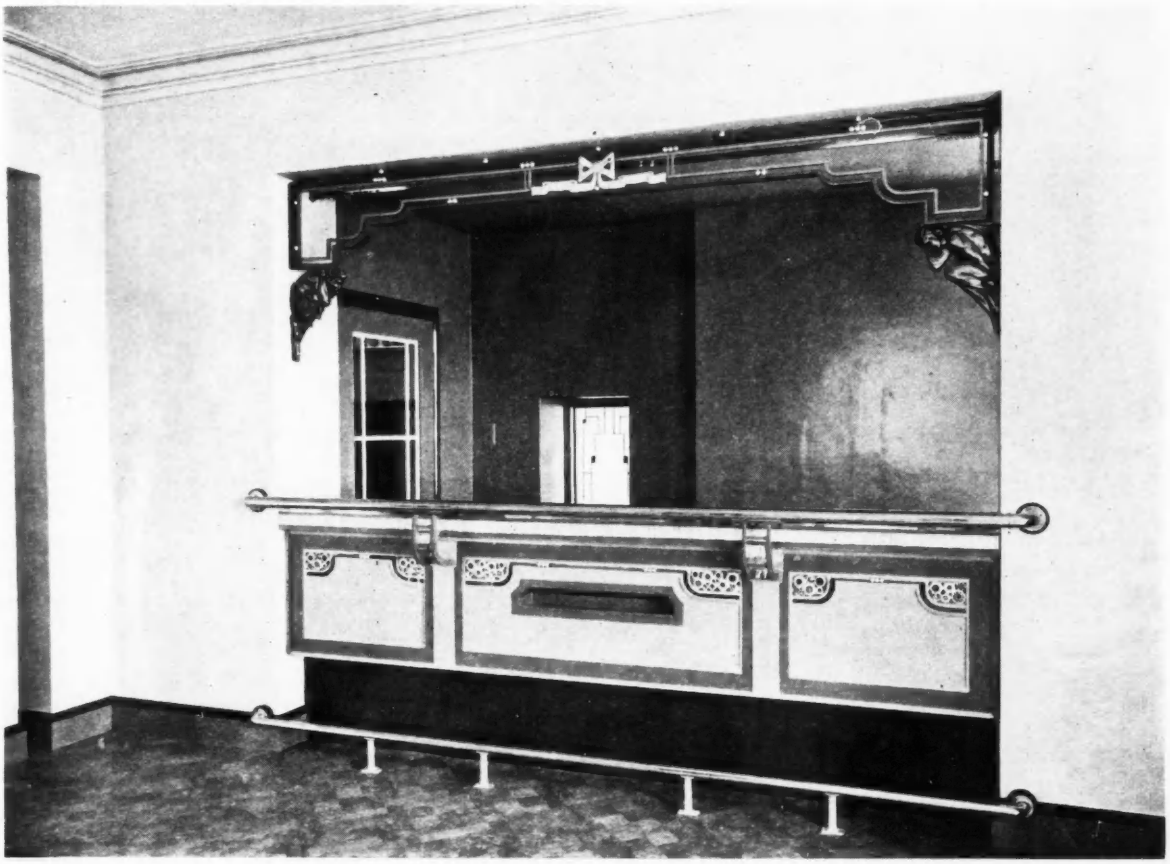
The top of the standard, which is of reinforced concrete, is 27 ft. above road level, and its form is clearly shown in the detail drawing reproduced on the preceding page. The cast-iron grilles which fill the circular apertures are painted red.

It may be interesting to note that the side-walks are paved with small flint-like stones, laid at random, with borders laid regularly in varying colours to form a pattern. The parapet, etc., is built up of precast slabs, and the surface is bush-hammered with tooled edges.

For purposes of comparison there are included in the drawing details of a cast-iron lamp-post also in Prague. It is one of several that stand in a formal garden which serves a fore-court to a block of Ministry offices. It is painted a pleasant shade of primrose yellow. In the base of the standard is a box containing winding gear for lowering the lamp for cleaning purposes.

A COCKTAIL COUNTER

IN STEEL AND GLASS, FOR A PRIVATE RESIDENCE



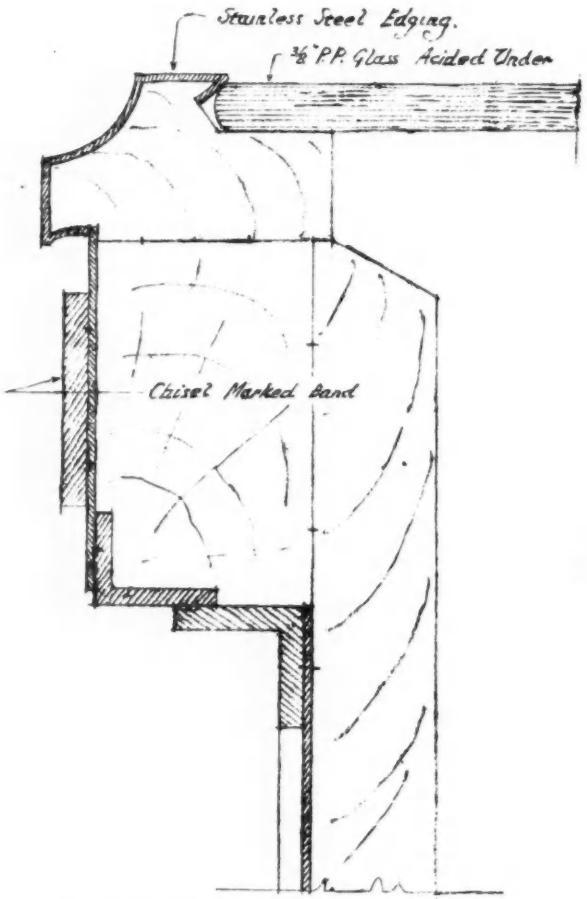
[*G. Alan Fortescue, Architect.*

THE COCKTAIL COUNTER FIXED IN POSITION (LEADING FROM DINING-ROOM AND FACING LOUNGE)

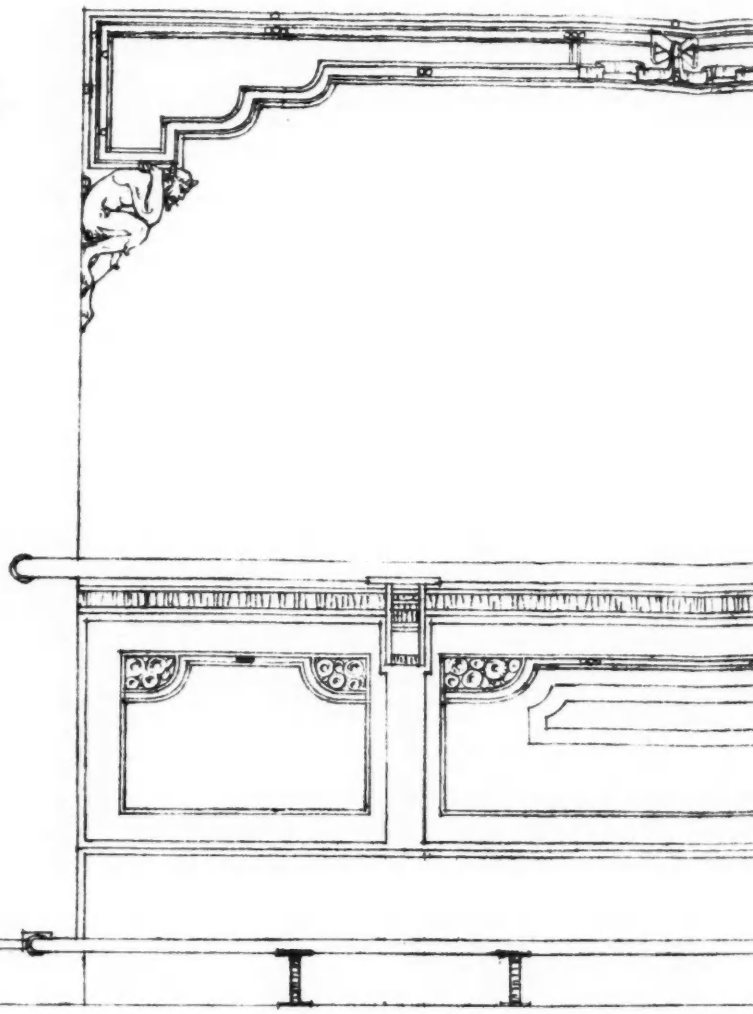
THE cocktail counter at Downside, Brighton, Sussex, illustrated photographically above and overleaf by scale drawings, is constructed mainly of mild steel, stainless steel and plate-glass. The acided plate-glass counter-top is bracketed from the main uprights to the counter-front, leaving sufficient space for cocktail requisites. Concealed strip lighting illuminates the counter-top and also the rosette spandrel panels, giving the latter a silhouette effect. The interior is lined in wood and fitted with two removable shelves.

There is a metal shield fitted behind the shaped opening to the centre panel, so that waste matter can be deposited on the shelf beneath and be easily removed. The narrow base resting on the floor allows ample foot room to exterior and interior. The arm and foot rests are in polished stainless steel, like the counter edge. The illuminated pelmet over is glazed with amber acided glass and supported by copper repoussé figure consoles.

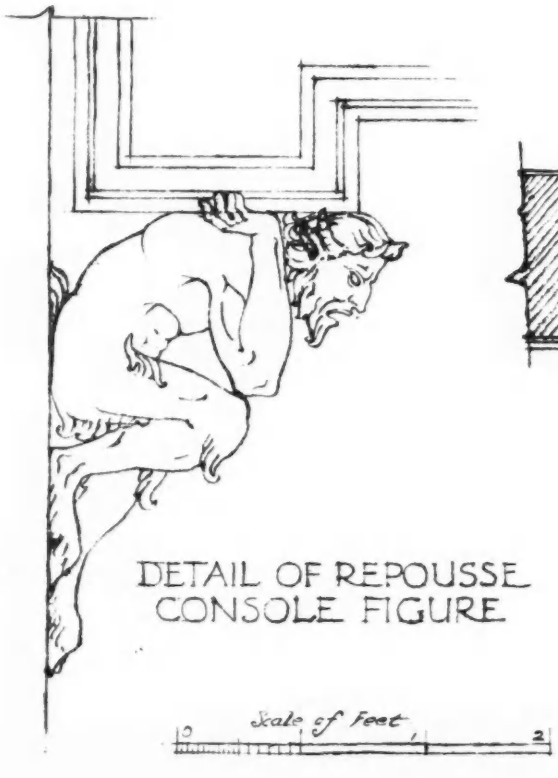
The whole unit was constructed in London, delivered in one piece, and cellulose-sprayed in green and gold, with small touches of bright colours on the rosettes and hammered enrichments, after fixing.



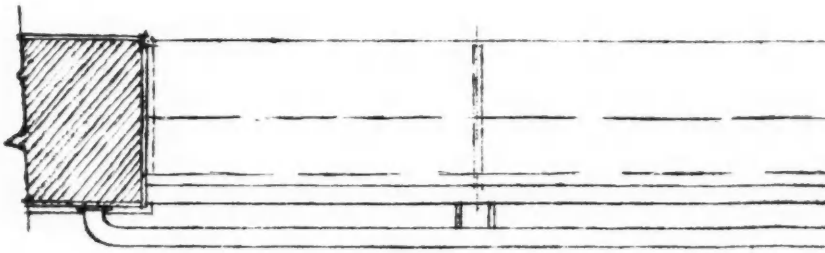
SECTIONAL DETAIL THRO'
COUNTER EDGE



ELEVATIO



DETAIL OF REPOUSSE
CONSOLE FIGURE

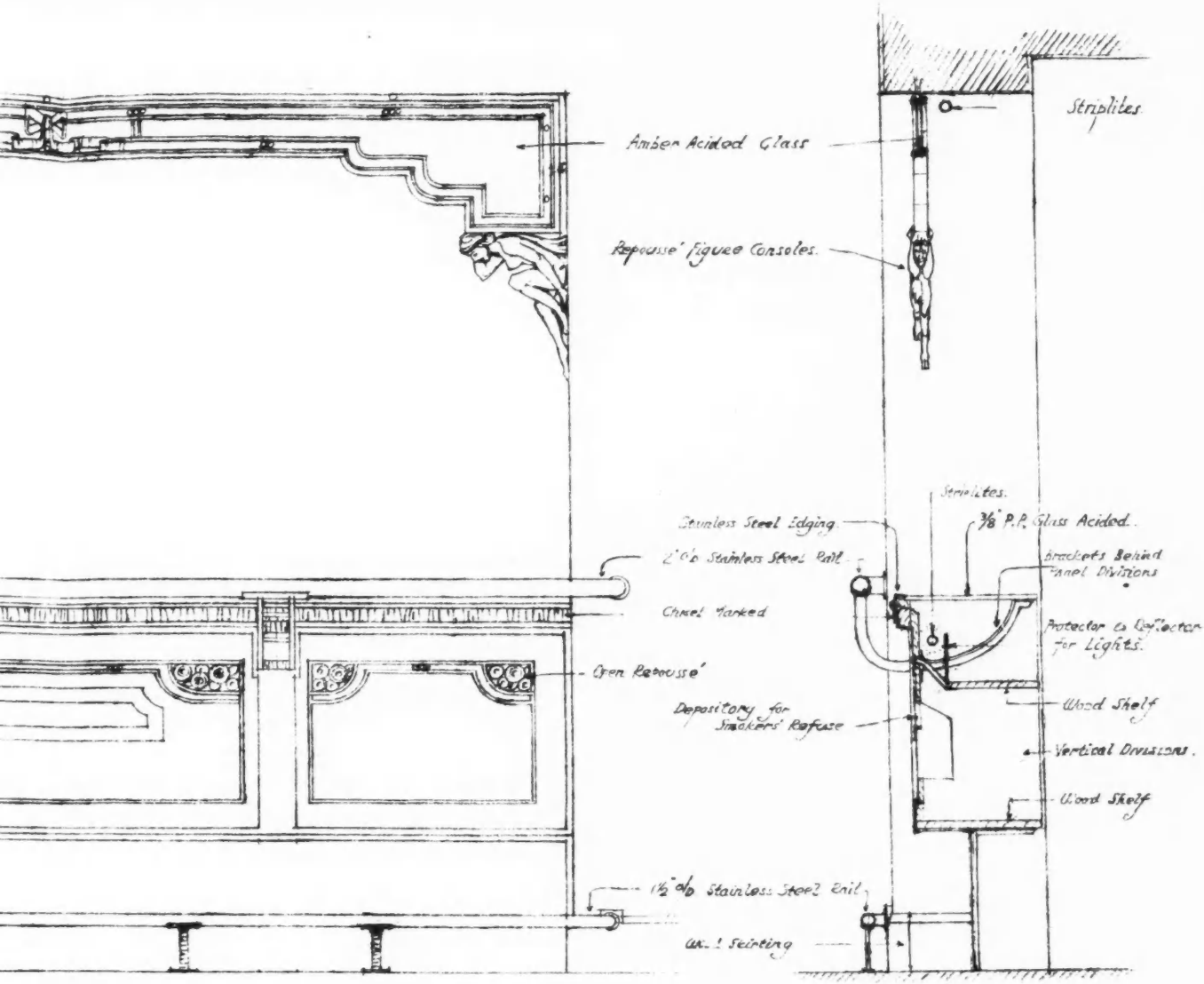


PLAN

DOWNSIDE B

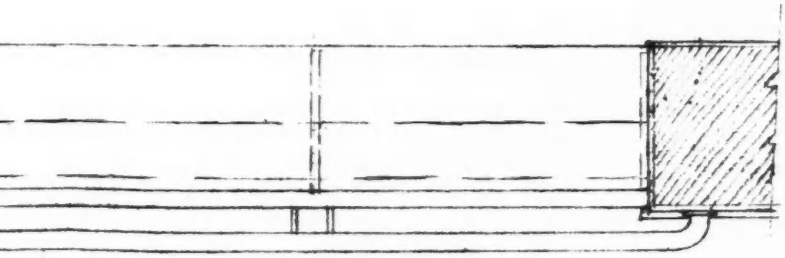
DETAILS OF COCKTA

IN MILD STEEL, STAINLESS ST

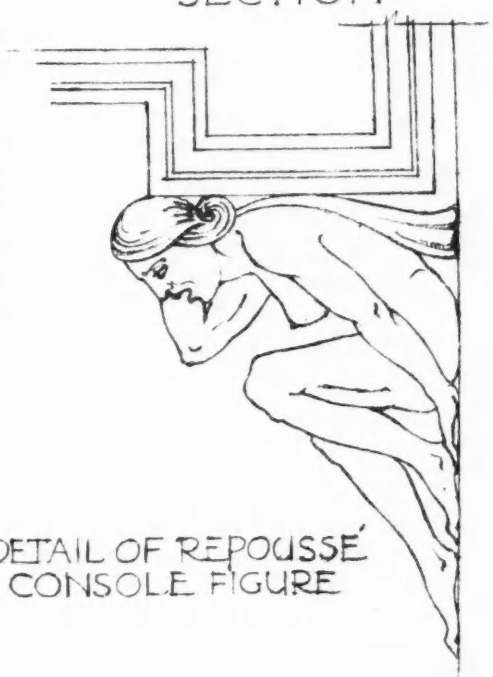


EVATION

SECTION



LAN



DETAIL OF REPOUSSÉ CONSOLE FIGURE

E BRIGHTON

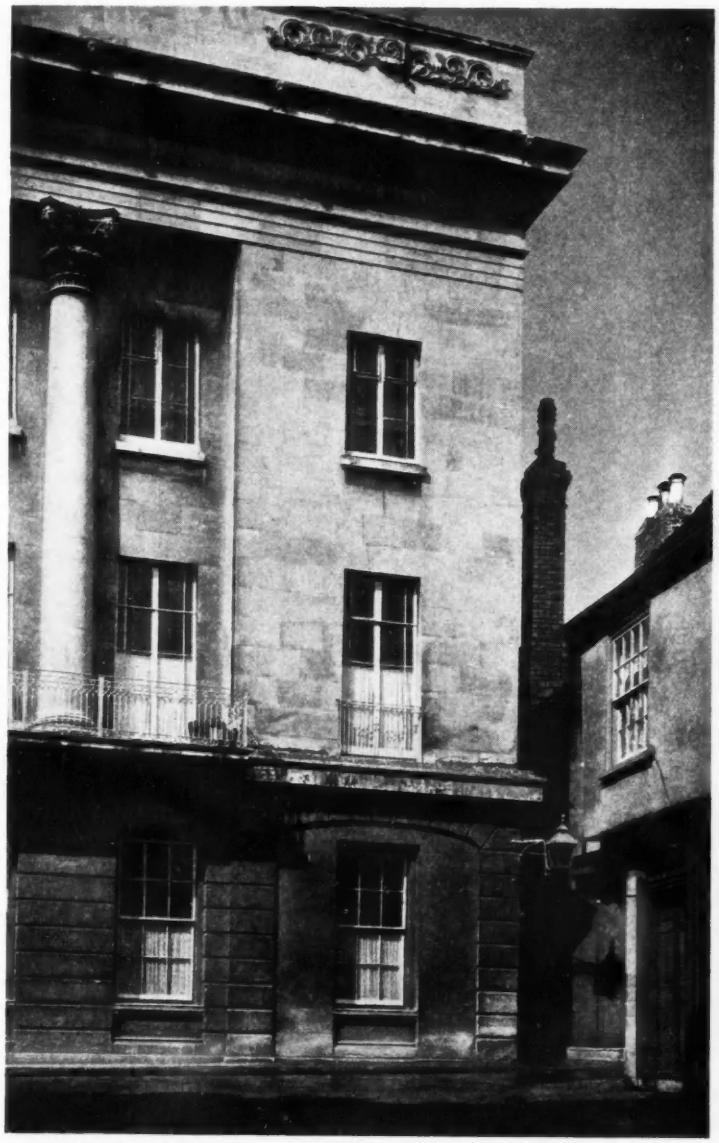
CKTAIL COUNTER

SS STEEL, GLASS. & WOOD

G. Alan Fortescue, architect.

SELECTED PRECEDENTS:

THE STREETS OF STAMFORD, LINCS.: II



1. *UNNEIGHBOURLY: CLASSICAL FACADE AND RUSTIC COTTAGES*

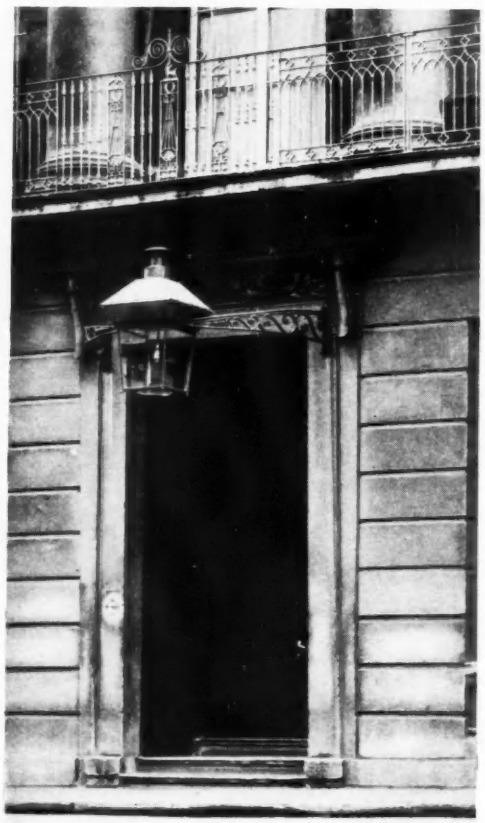
A MINUTE'S deviation from the Great North Road brings one to the Stamford Hotel (figure 1), the classical façade of which rises cliff-like from a narrow mediæval street. The builder showed amazingly bad manners in placing this columned front alongside rustic cottages, yet, despite violation of scale, the design per se *is interesting, and the details are refined.*

Delicacy of rustication has given the ground floor an effeminate air which is cleverly corrected by the use of regular-paned sashes, contrasting with more fanciful fenestration on the upper floors. The batter of the doorway (figure 3), the subtle echo in the iron lamp bracket of the motif in the door entablature, and the unusual design of the consoles all combine to form a satisfactory composition for the entrance, while the ironwork of the veranda above, though lacking in importance as a central feature, is of good design and acts as a delicate foil to the solid rotundity of the columns.

The good condition of the entablature (figure 2) gives an instructive indication of the extent to which the local stone can be used successfully for work requiring good definition, lasting well even in an exposed position.

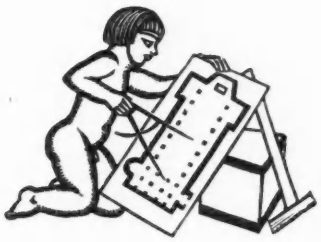
R. HURD

2. *A WELL-PRESERVED PARAPET AND ENTABLATURE*



3. *A DOORWAY WITH ADJUNCTS IN KEEPING*

THE ARCHITECTS' JOURNAL



WEDNESDAY, JULY 8, 1931

SEEING IT WHOLE

Cardinal Points in the Charing Cross Problem

BY the time these words are read it is likely that a decision will have been reached by the London County Council as to their future action with regard to Charing Cross Bridge. Although it is said on every hand that the public is tired of the subject, we return to it once more because we cannot think of it as a subject that architects and town-planners have a right to be tired of, even though its course has suffered by long delays and its issues are confused by politics and personal controversy.

The fact remains that the nation is shortly to be asked to invest an enormous sum in the reconditioning of a weak artery in London's circulation, and whether the reconditioning proposed is such as will effect a cure both now and in the future is ours to ask up to the very last minute of available time.

First, then, and most vitally, this is to be a scheme to cut through congestion to the relief of traffic. We must recognize that when congestion brings traffic to a standstill London will stagnate. Our very existence is bound up in perpetual motion.

Secondly, we are dealing with not merely a bridge, but London : a place of streets, buildings, activity, people. What we shall build will become part of the environment of its inhabitants and its future inhabitants.

Thirdly, we are building, in the highest sense, for England. For as Waterloo Bridge and St. Paul's Cathedral mark high levels in English cultural history; as Stockholm Town Hall proclaims the artistic sensibility of a whole nation expressed through its finest spirits; so again may Charing Cross Bridge and all that goes with it prove that we have lost nothing of the spirit for great works.

Charing Cross Bridge must be all three of these things from the very first. Useless to expect grandeur on a basis of meanness : as useless to sacrifice efficiency for grandeur.

What, therefore, we ask now, is whether the scheme that will be entered upon is to be an instrument for traffic circulation that will last long into the future ; whether the roads that it will create will be open, direct, free from obstructions; whether they will fitly provide for new buildings on such a scale as may bring relief to congestion elsewhere; whether the plan has looked forward to the inevitable changes in the mechanism of urban life ; whether it will fit itself into such a plan of London as may emerge from any scientific study and consequent re-creation that we may have to make for our own salvation in the future? Whether, finally, it is the very best, politics apart, that can be found ?

Has, in fact, the real problem been seen, and been seen *whole* ?

If, as we believe, the answer is in the negative, if very few of these questions are answered satisfactorily by the scheme put forward by Sir Leslie Scott, then we can do no other than regret its passage into action if such should take place. Meanwhile we can only hope that up to the very last minute these questions of principle will be applied to any scheme that remains to be reviewed by the London County Council.

This also we remember. It does not matter what course is ultimately followed, if it does not fulfil what we must regard as sound and wise principles, then there will be no reason why we should regard it as anything better than second best and bend all our efforts to making it better. We are, architects, engineers and town-planners, the guardians of high principle and artistic conscience. We have nothing to do with political compromise. We have nothing to do with second best.

THE ABBEY CHURCH, MALMESBURY, WILTSHIRE

The situation of Malmesbury Abbey provided natural advantages of beauty almost unsurpassed and up to a point indestructible. Much of the conventual building has long since fallen into ruin, but recent restoration, some account of which is given in a supplement to this issue, has secured a further term of lovely life for the church, and time and circumstance have left unspoiled some portions which rank among the finest examples of the work of the Norman church builders. The porch with its half-score of richly carved successive orders suggests, by the variety and intricacy of the work, the skill of the silversmith rather than the worker in baser and more utilitarian substances, and the graded scale of the enrichment when considered in relation to the mouldings reveals a triumph of rhythmical design.

NEWS & TOPICS

FUTURE OF THE REGISTRATION BILL

MANY rumours have been circulated during the past few weeks as to the future of the Architects (Registration) Bill. The position is that Mr. McShane and his friends have been very active in seeing that the Lords' amendments to the Bill have not been considered by the Commons, and it is becoming increasingly evident that the Government will have to provide the necessary time if these amendments are to come before them, and if the Bill is to become law this Session. The latest rumour is that the Government have decided to make themselves responsible for the final stage of the measure, and there is reason to believe that this is actually the case. If so, a day will be provided for the consideration of the Lords' amendments. If the Session is prorogued at the end of July or beginning of August, the necessary time will have to be provided during the present month, but if, as appears more probable, the Government simply decides to adjourn, and to continue the Session in the autumn, then it will be sufficient if the last stage is taken in October, or even November.

THE CONDITION OF WATERLOO BRIDGE

The stability of Waterloo Bridge is again in question in the Press, though the L.C.C. record little or no movement. People imagine that it may collapse at any time, though, and if one may accept the mass of supporting timber as evidence it would certainly appear so. But I have heard stories of wedges being driven in between the timber and the arch to make certain that the shrinking framework will continue to act.

*

My informant went on to tell me how the bridge, in his opinion, came to its present woeful state. According to him it was the rush of water in the now swifter river tides that loosened the mud and solid matter in which the old piles were lying, so that the bridge made its first slight movement, and that the Council, in panic, poured into the spandril tons of concrete at such high pressure that the pier was *driven* still further into the mud, and the piles pushed down on to firmer bearing. Simultaneously, the voussoirs cracked on the outer faces only while the real working arch took up a new position. I am to understand indeed that there is little likelihood of Waterloo Bridge sinking. The only difficulty is to keep the supports in position.

FITTER FITTINGS

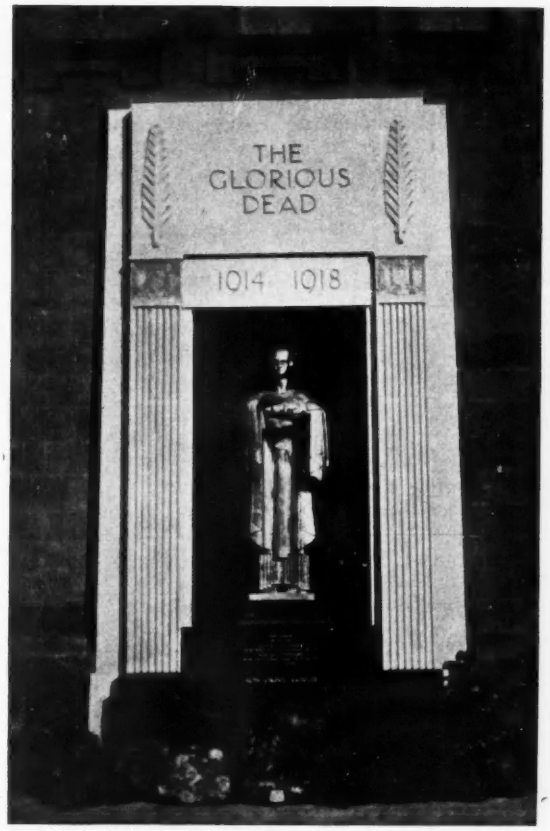
It used to be a standing worry with me to know which out of a number of execrable designs for small, and in some people's eyes unimportant, fittings I could choose as being least offensive. There were swan-neck fittings, crocus, I think they were called, lamp holders, all sorts of queer perversions of period doing service under difficulties, and precious little that could be called simple and straightforward and yet have character. Wall brackets I found the most difficult, but pendants were hard to find. Much searching brought me examples that were not aggressively fantastic and yet not dull, and now it seems that I reap the harvest of rudeness, for the travellers who call upon me have of late begun to understand—they and the firms they represent—and I can say with some measure of certainty that there are electric light fittings to be had that are cheap, varied in design, and good enough to please the reasonably fastidious.

*

Bath-room fittings are, naturally, the most completely realized in type, but enough of other kinds exists to make what used to be a torment an adventure. Don't think that public taste has entirely changed : for every one good design has twenty natural offsprings in sunset glass and maltreated metal.

STEEL HOUSING

I don't know what reason there is to expect that the Government's new housing plans will make large provision for the building of steel-frame houses, but I see that representations are being made to the Lord Privy Seal on this head, and it is by no means fantastic to assume that considerable savings could be made by adopting the methods of rapid steel-frame erection which have been extensively used in parts of Germany and America. Such houses would have no connection with the ridiculous attempts to induce people to live in tin boxes. The walls of steel-frame houses would have to be in some form of concrete—possibly light in weight and pre-cast, and standardization of possible unit forms would be a necessary concomitant. None of these things are frightening. Concrete we already have in one form or another and standardization is already apparent in the housing schemes of local engineers and surveyors and in the ghastly areas of speculative builders.



The new war memorial at Clydebank : James Millar, R.S.A., architect ; Walter Gilbert, sculptor.

Mass-production, if applied intelligently, can produce forms eminently susceptible of good arrangement. It is only a matter of intelligence. It therefore behoves us to look again into the matter of steel-frame houses, remembering what was done some years ago at Dormanstown by Professor Abercrombie.

BROADCASTS ON SCOTTISH ARCHITECTURE

The director of Scottish broadcasting in Edinburgh deserves our gratitude for having given six Scotsmen the opportunity of discussing the present architectural state of their country over the microphone. The range of subjects was wide : Lady Whitson, wife of the Lord Provost of Edinburgh, spoke on the "Changing Face of the Capital"—a fruitful talk largely concerned with town planning; Mr. Pilkington Jackson, the sculptor, elaborated this theme, and in talking of civic adornment advocated the erection of a fine modern civic hall for the capital in his discussion on "The Opportunities in Our Cities," both to give architect and craftsman an opportunity to prove their mettle, and to attract attention to Scotland as a modern country. Churches came under review next, and Mr. F. C. Mears, by visualizing a modern church built on and for Clydeside, made his listeners realize how unrepresentative of modern culture most ecclesiastical architecture is today.

*

Problems in rural building raised by the invasion of new materials enabled Mr. Gilbert Ogilvie to rub in some wholesome and constructive criticism of the cheap and nasty, particularly in municipal work; while Mr. Ian Gordon Lindsay gave an extremely interesting talk on the place of tradition in Scottish architecture. The illustrations that accompanied this talk, both in *The Radio Times* and *The Listener*, made it one of the most striking of the series, and brought out well Mr. Lindsay's contention that the modernism of Germany and Holland has affinity with the free-designing traditions of seventeenth-century Scottish architecture. This point was further elaborated in his summing up by Mr. Robert Hurd, who also drew attention to the important position of the late Charles Rennie Mackintosh as a pioneer of modern architecture more honoured on the Continent than in his native land. Mr. Hurd concluded that designing talent and good craftsmanship still exist in Scotland, but that both are stifled by lack of opportunity to develop, the bulk of modern work being done by municipalities.

MORECAMBE'S FALL FROM GRACE

The seaside town of Morecambe in Lancashire is as ambitious as most seaside towns. We remember that it has taken some share in town-planning and launched a grand programme of development. But local government in England is a curiously undisciplined and unlearned instrument, and it has not struck the councillors of Morecambe as incongruous that their town hall should have been designed as to its plan by their engineer and as to its elevations by outside architects. Did local patriotism impel them to this course or some perverse notion of economy? Either would be accepted with gravity as sufficient and proper explanation.

*

Morecambe today is not a beautiful place. I am not vindictive when I say so. It is merely that the arrangement of its streets and the buildings that line them are dull in the extreme and oft-times definitely ugly. One building alone cheered my heart during my brief sojourn there. The old L.M.S. hotel that stands by the old harbour is a building of much unpretentious charm. Long and low, with distempered walls and green shutters, it offers a pleasant and friendly invitation in a place with BOARDING HOUSE writ large across its features. This hotel, alas, as though its quietness offended, is to go, and a sumptuous palace is promised in its place. That hotel is the one note of dignity along the sea-front, and it is to be pulled down so that the place may be "laid out." It is very depressing. Not so much because an old landmark disappears as because local authorities in the main are so ill-educated and pompous that they are simply unable to command work of character, and seaside towns continue to be vulgar and dull. Complacency triumphs.

"CANT ABOUT RURAL ENGLAND"

Sir Peter Chalmers Mitchell is in a position to speak with unique authority on a particular aspect of housing—that of our four-footed fellow-animals (rather unjustly dubbed "dumb"). And now I find him vocal on behalf of the all-too-inarticulate biped. Many will endorse his commonsense. "I should like," he said, in opening Oxford's new Zoo last week, "to say a word against the wanton nonsense talked about those beautiful rose-covered hovels in the country—so pretty to look at, but with no light, no ventilation, and no sanitation, and in which birth and sickness have to take place in rooms in which children can hardly stand upright. . . . At the present time there is a great deal of pestilent nonsense talked by people who call themselves friends of rural England concerning the development of the countryside. I have no doubt that when the Romans drove their magnificent roads across the country some aged Druids complained of their oak trees being cut down. You cannot build a great road without sometimes interfering with the parish pump." But I am not altogether surprised that Sir Michael Sadler should have confessed that he had listened very nervously to Sir Peter's speech. He and I and you, reader, may know what he means; but are there not many who will be only too ready to twist his meaning?

AS TO THE MARBLE ARCH

Every now and again the ridiculousness of some particular aspect of London strikes some particular Londoner. This time it is "A.A.B.," that denunciatory voice from *The Evening Standard*, who is offended that Marble Arch should stand isolated in a sea of traffic, its mighty gates shut to no effect. He says: move it to make a monumental entrance to Downing Street. I think his suggestion is hardly practicable because in the first place I think he would find the arch bigger than he expected when set beside the buildings that flank Downing Street. Secondly, it was designed to form an axial monument to Nash's Buckingham Palace, where it would have stood clear. Professor Adshead once suggested in a charming drawing that it might be set again in the line of the Park railings so that it should be used as it should be. The whole point is that a monument of such suggestive form suffers by neglect and gains enormously, functionally and æsthetically, when an instrument, not a luxury.

ASTRAGAL

PARK LANE HOTEL

Piccadilly Extension

DESIGNED BY MESSRS. HENRY TANNER

AN extension to an existing building has an interest peculiar to itself in that it offers opportunities for somewhat distinctive treatment on its own account, yet it must needs subdue its own character in some degree to that of the original building, which is usually of larger dimensions and of greater importance than the added portion. Such elements of interest are not absent from the recent extension to the Park Lane Hotel carried out under the direction of Messrs. Henry Tanner.

Even a very cursory glance at the exterior facing Piccadilly conveys the impression that the new portion is in some degree subsidiary to the rest of the building, while at the same time it forms a complete architectural whole which can be judged upon its own merits, as distinct from, though connected with, the main block. As to material, it resembles the older part, even in the fact that adjacent to the entrance there is provision for business premises apart from the hotel. But the two shops which flank this new ballroom entrance are on a small scale. The entrance itself is a trifle lighter, perhaps more frivolous in treatment, than the main entrance, the façade shows less emphasis on window openings and cornices, and the whole is more simply designed, in a manner suitably indicating to the eye that the newer, narrower part of the whole group is in fact an extension.

Within, the same evidence of independent completeness, yet of subservience to a larger whole, is perceptible. The great ballroom occupies the principal part of the basement floor, and alongside it is a spacious ante-room. The independence of the new block is displayed, moreover, in the several upper floors, each providing self-contained suites overlooking the Green Park, and a number of bedrooms at the back. But these floors are connected with the older part of the hotel by means of new corridors, and access is also provided to the ballroom and its accessory rooms and stairways from the main building, as well as by way of the new entrance.

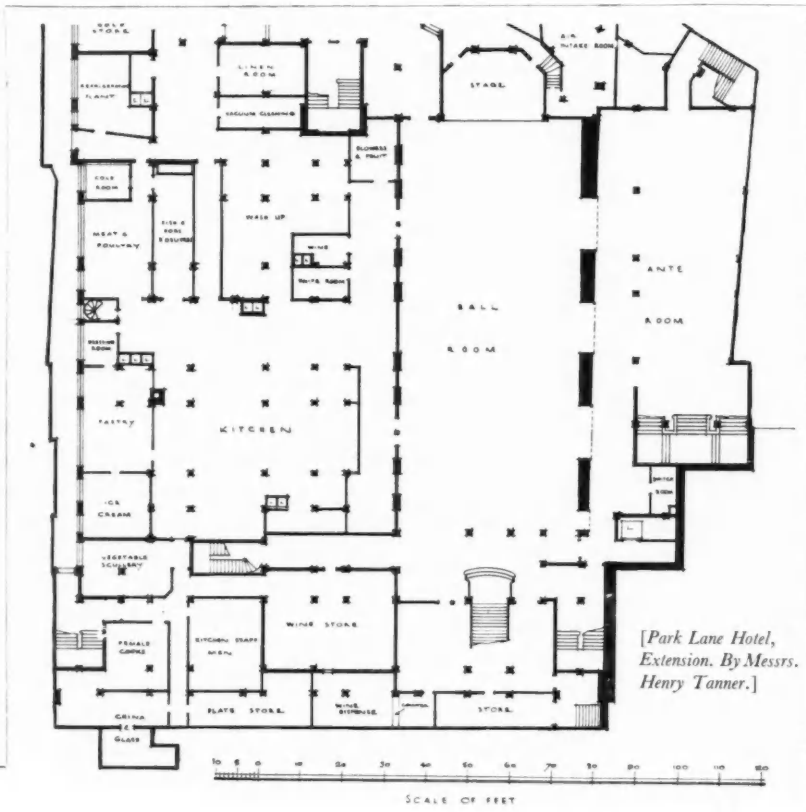
The new entrance to the ballroom. The marquise is of gold and green; the inner doors have a silver-bronze trellis. Black granite forms the base of the façade, in which two small shops are set beside the doorway.

The staircase to ballroom balcony, showing dwarf wall of Swedish green marble, with balustrade of silver-bronze. Clusters of lights in various pyramidal and tiered groupings combine with mirrors to provide brilliant illumination.

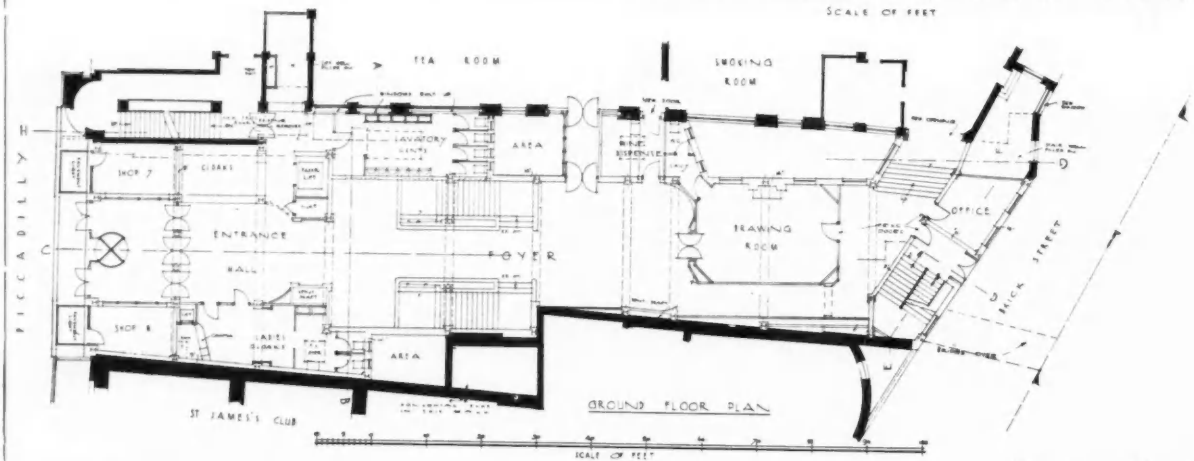
C

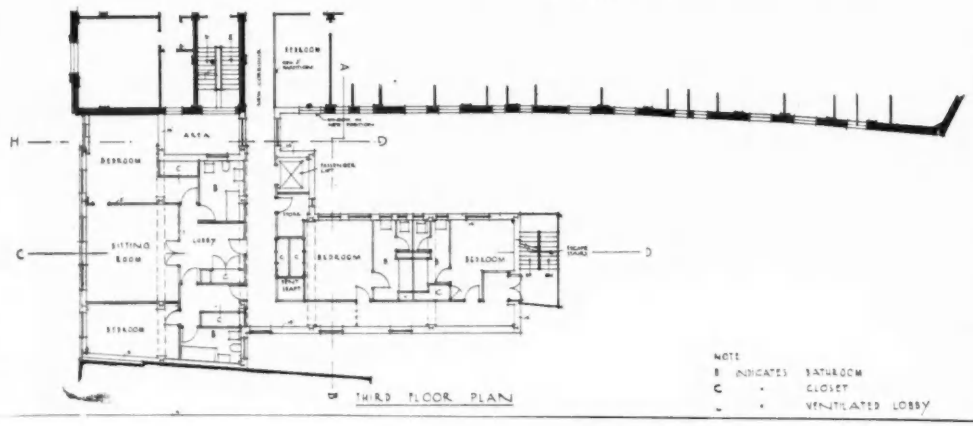
The subdued colour scheme, and the wall surface of gold-lacquered silver-leaf on the ground floor and the staircase to the ballroom, are especially intended to supply an unobtrusive but effective setting for the colourful frocks of women guests. A note of green and silver, introduced outside by the marquise sheltering the entrance, is touched with varying emphasis within, particularly by means of green Swedish marble and green-stained veneered sycamore in conjunction with silver mouldings and silver bronze balustrading. Decorative wall panels, carried out in transparent colour, and modernistic-oriental in character, supply the requisite touch of sophisticated gaiety at the sides of the staircase. An amber-tinted wall surface below the ground-floor level takes the place of the silver toned walls elsewhere, and is likewise foreshadowed in the light gilded decoration at the entrance.

Mirrors, appearing in many subsidiary and decorative positions in the scheme, are also employed to form the ballroom side of the sliding wall, capable of screening completely the ballroom from the ante-room. A mezzanine floor provides a promenade gallery with a view into the ballroom on two sides. V. M. C.



[Park Lane Hotel, Extension. By Messrs. Henry Tanner.]





Basement (showing whole of building), ground- and first-floor plans. The ground floor shows, in its axial planning, from the entrance right through to the drawing-room, the independent unity of the new building, while a new opening behind the drawing-room, and other new doors on the same floor, as well as a new corridor on the third floor, provide inter-communication.

Park Lane Hotel Extension.]

Almost cubist severity combines with the freedom of rococo curves in the attainment of novel effects at the ground-floor level. Here first impressions prepare the guests for subsequent variations on a similar theme.

[*By Messrs. Henry Tanner.*

The spacious entrance hall leads to the foyer and the staircase descending to the ballroom. Triple inverted cones surmounting the large stanchions with their modernistic capitals, provide the principal means of lighting.

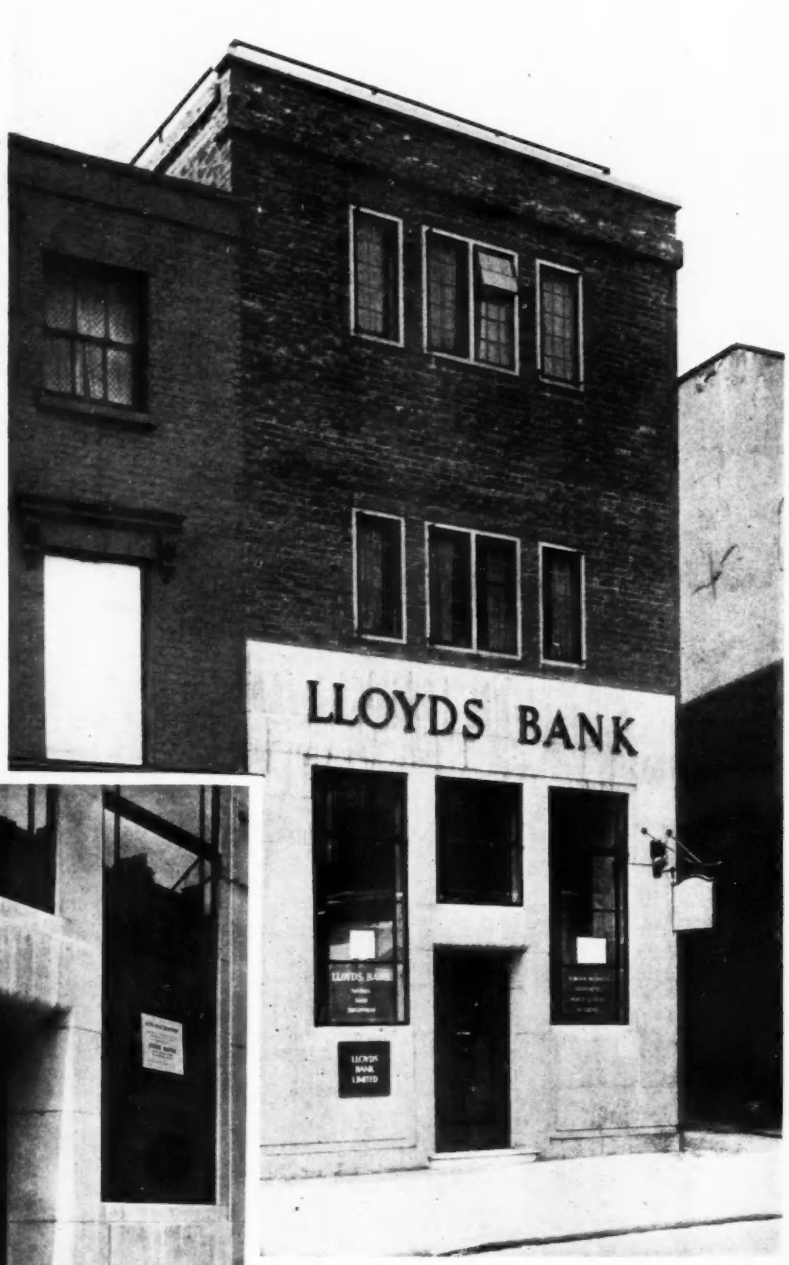
LLOYDS BANK,
Kentish Town Road, N.W.

DESIGNED BY
G. ALAN FORTESCUE

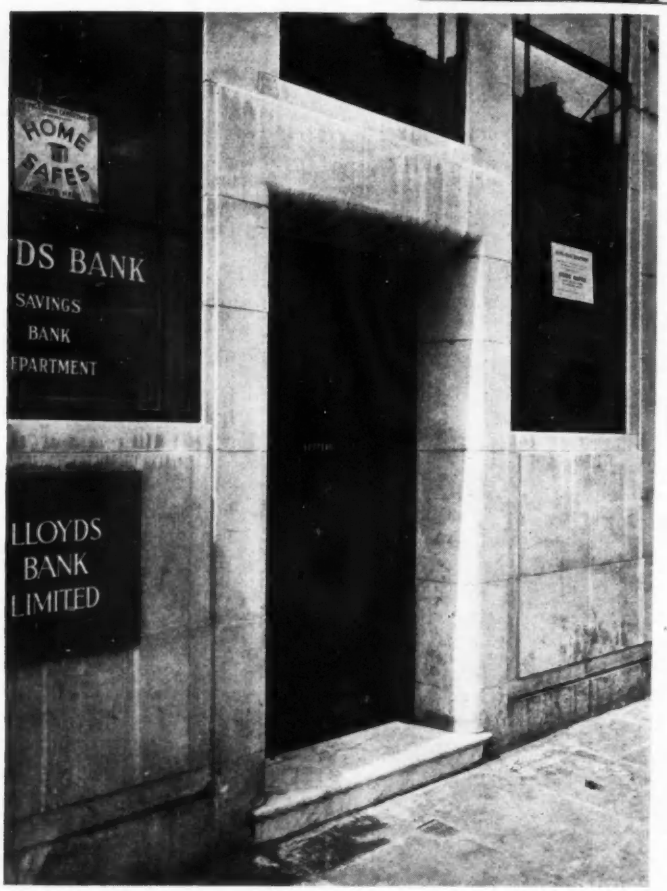
THE front of the typical small branch bank here illustrated is faced in artificial stone, the remainder of the walling being built with Horley facing bricks, finished with a flush joint.

The ground floor provides a banking hall, measuring 28 ft. by 16 ft., and accommodating three cashiers and four ledger clerks; and a manager's office, 10 ft. square. There is a heating chamber in the basement. The first and second floors are designed as a flat for separate occupation, with an entrance on the ground floor from a right-of-way running at the side of the bank premises. The first floor affords a sitting-room, a kitchen and a lavatory; the second, a bedroom, a bathroom and a linen room.

All the floors throughout the building are constructed of patent flooring. Some of the working spaces, such as the staff side of the counter and the manager's office, etc., are laid with wood-block flooring; the public space however, is floored with marble.



A general view of the front to Kentish Town Road.



A detail view of the street entrance and door. The front of the bank is faced with artificial stone; generally, the walls are of Horley facing bricks.

For the vacant office of City of London Surveyor (in succession to Mr. Sydney Perks), the Officers and Clerks Committee have selected three candidates. They are Mr. A. F. Bourdas, Valuer to the Westminster City Council; Mr. Albert Endicott, Superintending Estate Surveyor, H.M. Office of Works; and Mr. F. C. Read, Principal Clerk to the City Architect and Surveyor, who has been in the department since 1889.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : vii

BRADSHAW & SON: BUILDERS

BY KARSHISH

(H. B. CRESWELL)

THE brand-new Clerk of Works appointed by H.M. Office of Works to see the roof taken off the Brayness Post Office and two stories built on top, with extensive rebuildings and additions in the rear, after, on his first arrival, instantly interviewing the postmaster, at once hurried off, as in duty bound, to ginger up the Contractor.

Messrs. Bradshaw and Son had their offices in a detached Victorian villa, and their yard and shops in what had formerly been the garden behind it. The blighted aspect of the front in-and-out drive—where the one skeleton limb of a last-surviving laurel held aloft two dusty, fainting leaves to the witness of heaven from under a heap of empty cement barrels; and where ironmongers' and painters' stores could be seen through the bay windows of the half basement on each side of the front steps—was out of mind inside the door. Here neat efficiency reigned. The woodwork was freshly grained and varnished; a counter with a hatch filled an opening between the entrance-hall and the former dining-room; and the treads of the stairs were covered with lead, copper-nailed and finished with brass nosing-strips, highly polished.

On asking at this hatch for Mr. Bradshaw I was shown into the room behind it by a fresh-faced boy clerk, with his hair brushed into a quiff and his coat tightly buttoned, and given a chair from which I heard word passed through a door at the back for "Father." After a minute or two a tall, sickly-looking man of thirty, with an untidy brown mane and beard—as though his small head had been dipped in hair which had partly stuck haphazard to it—came in and told me simply, as though I were one of the family, that "Father" was out and about, but would be in shortly. This was Mr. George Bradshaw Junior. I mentioned I had visited the Post Office and, being under the impression that the chief duty, and pride of calling, of a Clerk of Works was to raise objections, at once got to business and objected to planks being deposited in the side passage.

"Oh, well, we've got to get the work started *somehow*," said Mr. George.

"But the work has *not* been started," I told him. "That's another point. The contract date for commencing is the 12th. More than a week has gone by and nothing has been done."

"Well, we must have a chance to get the men together, and order the bricks; and there's special scaffolding wanted. It will be an awkward job to tackle, anyhow—and then the tarpaulins, too! We can't get the extra size, and, as far as we can gather, it's not to be had. We shall have to put on a sailmaker to join what we've got. Lucky there's a plenty in the town can do the job."

"But the point is that the letter ordering you to commence is dated the 12th and——"

"Oh, well, there's time enough. We can't start before we're ready. Richards is just about clearing up at Deal. He will be free the end of next week. We can't do any good till Richards comes back."

"But you are under a penalty of fifteen pounds a week for each week or part of a week during which the works may be in arrears after the expiration of nine months from the contract date for commencing; and, from what you say, the best part of three weeks will have gone by before you've even made a start," I said. I had, it will be observed, sweated up in Conditions of Contract to some purpose.

"Well, we can't start before we've got the men and the stuff—that's flat," said Mr. George.

At this point the senior member of the firm came in. "Father" was a tall, burly, grey-haired man of sixty, with a beard trimmed navy fashion, a flushed face and small, hot-looking pale-grey eyes, with the pupils contracted to such mere pin-points that there appeared to be none. His manner was impetuous and flurried.

"Oh! I see! Well, we didn't expect to see *you*," he said, when his son had told him who I was. "We understood Mr. Titmus was going to look after the job."

"Who is Mr. Titmus?"

"Titmus? Oh, he's our chief architect here, Titmus is. Everyone knows Mr. Titmus."

"Why did you think *he* was appointed?"

"Oh well, that's what's said in the town. He didn't exactly tell us so himself in so many words. So you'll likely be staying on here, I suppose."

"Certainly. Till the job's finished."

"Oh! Well! Yes! I see! All right! We shall be making a start now just as soon as ever Richards gets back."

"I was just saying that you'll be nearly three weeks behind time."

"Eh? Behind time! How's that? We haven't begun yet!"

"Exactly. You're late!"

"Late! What does he mean?" He looked at his son.

"He says we ought to have started when we got the order," said Mr. George.

"Well, so we are starting, aren't we?"

"But you haven't," I said. "I've been down to the Post Office to see, and absolutely nothing has been done."

"I've been telling him we need a week or two to get ready in," said Mr. George.

"Well, but you ought to have been prepared beforehand. You contracted to begin when you got the order, which was given on the 12th, and . . ."

"Well now, that beats anything I ever heard tell of," Father burst out, flinging his hat down on the table. "Start a job the day you get the order without a brick or a barrow or a man to start it with! Do you suppose we keep men on our pay sheet waiting in case we get an order, and foremen kicking their heels about the yard, and stacks of bricks and all sorts in stock? Why there's goods specified we never heard tell of before. We shall want the iron drain pipes first go off; and some of those glazed angles from Burmantofts, which has got to be built in soon as ever we start, will have to be special made. Richards can't leave the Deal job till fag end of next week—and lucky he can then; and if he came sooner he'd be standing idle till the trucks can be cleared, for a mort of the plant has got to come from Deal, and you know what the railway is when you're in a hurry. Start on the 12th! My word! We can get started as soon as anyone—yes, and get finished, too; and what we can't do nobody can do—and so I tell you. Not getting started! Here, Jack, fetch the order book. Not started yet! and scarcely a week since we signed! A nice thing, I will say! Here you are, you can see for yourself. Milsons—never used their ground lime before. Burmantofts, special. Macfarlanes—that's the Angus pipes. Bricks, urgent. Dorman Long, stanchions—they've got to be special made. What more do you expect? Here is near a dozen acceptances of the quotations we got—that's the order number for the Post Office, D. 107; count them and see for yourself. Not started, you say! Well, if *that* isn't making a start, I'd like you to tell me how you'd have us go to do it. My word! Not started yet!" and poor Father subsided, flushed, breathing deeply, and much agitated. His vehemence, which made his whole body shudder, would have overborne my inexperience even if his arguments had not.

" I didn't know what was being done," I said, weakly. " I've only the contract to go by, and I've got to see it carried out."

" Oh well, we shall keep to our contract. You may rely on that. You will see for yourself, soon as ever Richards comes back, whether we are getting started or not."

The Clerk of Works, however, was not at the end of his resources.

" There's another thing," I said; " the work of the *Post Office* must not be interfered with."

" Oh, well, we shall see to that, of course; but I've got to carry out my contract. Mr. Taylor spoke to my son last week——"

" Mr. Taylor ? "

" The Postmaster."

" But his name's *Tyler*."

" Oh, well——" Father began in a judicial tone.

" How do you spell it ? "

" Why, T A Y L O R—don't he ? " He turned to his son, who nodded.

" But I was told ' Tyler,' and I called him Tyler and he didn't correct me."

" No? Well, there's a lot that call him that way—but, as I was saying, he stopped my son in the street and said how he wanted this, and didn't want that; and how one thing had ought to be this way and the other different; but if Mr. Taylor thinks he's going to order me about as if I was one of his new young Post Office ladies that cries to him when he talks at her, he'll find he's mistaken. I've been in this town two-score years and more longer than Mr. Taylor has; and wearing a top-hat on Sunday and sending his boy to Mr. Stowler's school is not going to make all the difference as *that* comes to," and Father laughed shortly and not very pleasantly.

" The various works are to be carried out in such a manner and in such sequence as the architect shall approve," I said glibly.

" Yes. That goes without saying, of course. We understand, and will give the architect satisfaction, you may rely on that."

" Will you send for the drawings and specification, and let me know what you propose ? "

" Well, it's just on dinner now; and we close down Saturday afternoons," said Father. " But next week, soon as ever Richards comes back——"

Just then a whistle sounded shrilly in the distance, and there was immediately a sound of brisk movement in the adjoining room and on the floor above.

" Are you putting up anywhere ? " Father asked.

" I'm going to look for rooms this afternoon. I came straight from the station."

He spoke aside to his son and then said to me in a simple, frank way :

" I can't ask you in myself because my wife is laid up with a nabcess, and they're not expecting anyone at home; but my son will be glad to give you a bit of dinner, if you're not particular. He lives quite handy here."

The hearty good nature which prompted this offer of hospitality to a stranger was spontaneous; and the recollection of my manner of declining the invitation has ever since made me want to sink through the floor. No doubt I was wise to excuse myself, for Tallard would certainly have had misgivings if he had come to hear that his Clerk of Works had got his legs under the contractor's table within an hour of first meeting him. Wisdom, however, bore no part in my refusal for, although I perhaps had an instinctive sense that intimacy of this kind was inappropriate, I was unaware of any sinister implications. The proposal was, however, entirely unexpected and took me by surprise; my natural shyness reduced me to embarrassment; and my attempts to extricate myself led me to insincere halting excuses which I recognized as having so much the complexion of social snobbery that I set the gilded horror on my confusion by colouring up and thereby confirmed the impression I specially dreaded to give—namely, that Father had presumed on the condescension of a superior. The figure I cut was so disconcerting that Mr. George, with innate good taste, turned to look at a photograph of a brand-new butcher's shop with a brand-new butcher standing at the door, which was framed on the wall: and Father gazed steadfastly at the floor.

" Oh, well ! All right ! Very good ! " he said. " Then we shall look to see you again some time next week "; and on that we shook hands and I left them.

I wanted to kick myself as I walked away, and had an impulse to turn back and accept the invitation: and the memory of that moment still remains a painful one, for I have long come to know that men of the rank in life of the Bradshaws are of the salt of this earth. Theirs is the state where the realities of life are frankly and simply acknowledged as ever-present facts; and where pretences, make-believes, opportunism, posturings, affectations, solemn hocus-pocus, cat-like sycophancy and insincere conventions are furthest to seek : and if I were given the choice of two impossibilities, I would rather hold the esteem and share the freemasonry of such men than have the patronage of princes and be the cynosure of salons.

" Father " was so called by all his men owing, probably, to Mr. George's habit of continually going about asking, in a chirpy manner, " Seen Father anywhere? " " Father been this way?" but, needless to say, I never so spoke of him. Poor Father, as I soon was to gather, had a few years before been confined for months in a lunatic asylum; and his often confused and always vehement manner, the air of watchful strain of his son, and the circumspect attitude towards him of the men, supported the testimony of his unearthly eyes that all was not well with him. Sometimes he was jovial and expansive, and on one such occasion he gave me an account of his lapse from sanity with the simple, cheerful frankness with which a man might tell of any other unpleasant experience.

" It took five of 'em and a policeman to hold me down," he said with modest pride; and when I left the asylum, Mr. Geoghan, the chief attendant, said to me, ' We've had a many strong 'uns here in my time,' he said, ' but you beat the lot,' he said."

Mr. George was quiet, subservient and wary, and seemed to act on an instinctive understanding of the wishes of his senior, whose mind sometimes became so much entangled, when his decision was waited for, that the point in debate had to be, for the time, dropped.

It was at Brayness that I first began to be aware that " the pecking order," which exists among all creatures living in community, is paramount among human beings; and that for an architect to be well born, or at least to be classified as a Public School man and used to good society, gives him the great advantage of a good position in that order. The pecking order is so called because it is best observed in the fowl run, where each bird pecks or is pecked by the others in a fixed unvarying rule of precedence; so that one bird, at the top, pecks all the others and is pecked by none, and that at the bottom pecks none and is pecked by all. Among fowls the right to peck is found not to depend upon any physical or (perceptible) mental advantages; and of human beings the same is true, for the power to peck—which is the ability to wound feelings—depends mainly upon accident of birth and upbringing. Thus king pecks duke; duke, squire; and squire, tradesman, through all stages and gradation down to the wholesaler who pecks the retailer, and the daughter of the engine-driver who pecks the daughter of the donkeyman. Personal force and intellectual attainments have little or no part in establishing the pecking order. Amazing as it may seem, a certain Colonel Lockwood, now gone to oblivion, was able to peck even Mr. Bernard Shaw—as anyone who cares to read the preface to *Blanco Posnet* may observe. The pecking power of aristocracy entirely subsists in its

invincible ability to hurt the feelings of commoners, as I later had occasion to learn; and at Brayness the circumstances of my birth and upbringing—relatively obscure though they were—gave me pecking power over everyone I had to do with.

I am reminded of this by the circumstances of my not being corrected by the postmaster when I mis-called him Tyler. I was horrified when I knew what I had done; but my horror was entirely due to the idea that Mr. Taylor, by identifying me with the sort of person who pronounces "a" "aye," would assume pecking rights over me, as, in fact, he had begun to do. In those pre-typewriter days I wrote an execrable scrawl, was bad at spelling, knew little of geography, used arithmetic like a schoolboy, had no experience of life, and was unexercised in authority and ignorant of affairs, so that, on all counts, Mr. Taylor was a weightier man than I was, besides being an older; but I knew instinctively that he was far below me in the pecking order, just as I knew that the Bradshaws, for all their mastery of technicalities in which I was little more than an intelligent inquirer, also were. I at least could not merely smile at Mr. Taylor's vaunted Sunday hat, but could feel ashamed at the thought of joining him in one; and when, in the week following our introduction, Father and Mr. George definitely conceded right of peck to me by addressing me as Sir, I regarded their action as perfectly fit and natural, without reflecting that a Clerk of Works is not usually so addressed by the builder.

It will have become clear before this that the unlucky Bradshaws had caught a tartar. I was, in fact, a very devil of a Clerk of Works, and must have been a severe tax on the builders' patience and, I am afraid, to a certain extent, on their pocket as well; for I had far too much the idea that my duties were akin to those of a policeman. I had no experience to inform discretion, and I enforced my authority without sympathy for their interests or understanding of their difficulties; and I must have wearied them by my ceaseless questioning of their methods and by my rigid interpretations of the letter of the specification. In this, if I did not enhance the prestige of the Office of Works, I no doubt served Tallard's purposes excellently; and it was not the building, but the builder and the Postmaster and, I may add, myself who suffered from my too stiff and conscientious methods; for the difficulties I encountered were for the most part those I made for myself, and, if they were not serious, they made up for that alleviation by their frequency. It was the saving grace of the ready humour, unfailing tact, wisdom and unquenchable high spirits of the foreman, Joe Richards, that kept things going without positive mutiny or deadlock; and, after a time, under his skilful guidance and, probably, no less skilful manipulation, I obtained a better idea of how to fit myself into my shoes. It was not, however, the pressure against which I daily battled that prompted me to readjust myself, but the heavy touch of an anonymous joker.

Some weeks after the work started, I had annexed, as my office, a highly convenient room; and to advertise my dignity, as well as my whereabouts, I pinned up outside the door a bit of paper bearing the words, "Clerk of Works." It was with a shock which discomforted me like a blow in the wind, that I found a few days later that someone had added to the inscription with a blunt lead pencil, so that it read: MR. CLERK OF THE WORKS SQ UIRE, F.R.I.B.A.

NEXT WEEK: VIII—"JOE RICHARDS, FOREMAN"

The previous instalments appeared as follows:

May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.

LETTERS FROM READERS

A Neighbour of the Bank

SIR,—As the person guilty of omitting to draw attention to the charming good manners of the Lothbury bank, I stand chastened by Mr. Nathaniel Lloyd.

But may I have your permission to put an idle question to him? Suppose the Bank of England, in contemplating rebuilding, had decided to remove their venue nearer their chief debtor, and suppose they had chosen that site in Bridge Street, Westminster, which faces the Houses of Parliament, and which abuts on to Norman Shaw's Scotland Yard building on the Embankment, that site which is now occupied by a heterogeneous mass of Victorian respectability. Suppose, as a further idle thought, the architect entrusted with the new building had been suitably impressed with the ennobling inspiration of good architectural behaviour, would he have designed his Embankment elevation in the Norman-Shaw-Queen-Anne manner as a neighbourly gesture to Scotland Yard, and his Bridge Street front in a style to preserve a civil face to that paragon of English national architecture, the Houses of Parliament?

J. R. LEATHART

Lowest Tenders

SIR,—I quite agree with "Suburban Builder," and have always made a practice of informing my clients that if I invite tenders I expect the lowest tender to be accepted, unless it is out of proportion to the rest of the tenders, in which case I point out that it is an unpractical tender and the work could not possibly be done for the money. I consider it very unfair, when a contractor has been "invited" to tender, if his price is lowest, not to accept it. Why put him, at special request, to the expense of pricing if he is not to have the job?

If a client insists on the covering clause being on the invitation, the architect must follow his client's instructions. In the case of advertising or public notice, anyone may tender as long as they pay the deposit for quantities, and it is then absolutely necessary to protect the client's interests by inserting the covering clause.

C. F. BURTON

SIR,—If a selected number of builders are asked to tender for a job, the lowest tender should be accepted, provided that it is not too much below the next one above. The clause, "the lowest or any tender will not necessarily be accepted," is used as a safeguard in case the lowest man complains—in spite of the suspicious lowness of his tender—and also in case the client alters his mind and decides not to build at all, or even to invite another bunch of builders—which he has a perfect right to do. "Suburban Builder" must be living in a locality where right principles are not thought much of, although, of course, there are good and bad in all walks of life. I may say, however, that from thirty-six years' experience as an architect I have found that it is not customary for the great majority of clients and their architects to treat builders in the way of which he complained.

I think it would be well if "Suburban Builder" considered the motto, "Once bitten, twice shy," and refrained from tendering in future for the people he has mentioned.

ALLEN T. HUSSELL

SIR,—I think "Suburban Builder" has a real grievance. When inviting builders to tender, I have always informed my client that, although he is not legally bound (and I should object to such a condition), he is morally bound to accept the lowest tender.

When inviting builders in a limited competition, only those in whom the architect has confidence are asked; therefore, it appears to be nothing short of an injustice not to accept the lowest

tender, provided that the estimate is a fair one, and not unreasonably low or obviously a mistake, in which case it would be a greater injustice to bind a man to an impossible figure. I quite agree that where a client is keen on employing a particular builder, and invites competition for the purpose of checking his price, such a practice is to be deprecated. Moreover, it shows a lack of confidence in the very man to whom the client is desirous of entrusting his work. I know that the business man has little room for sentiment, but to me an ounce of sentiment is worth a pound of law

C. F. W. DENING

SIR,—With reference to the letter from a "Suburban Builder," in the case where a number of builders are definitely invited to tender, the assumption is that they would not be invited unless considered capable of doing the work; therefore in my own practice I always advise that there is a moral obligation to take the lowest tender, provided that this tender is not due to a sudden disproportionate drop in reference to the others, and, as a rule, this practice is accepted by my clients. There have, however, though not often, been cases where a client, having a preference for another name on the list, offers the work to this man, provided he will reduce his tender to the amount of the lowest, and I have never known a builder refuse to do so.

In the case of an open invitation for tender by advertisement, the same moral claim cannot exist, as people may tender who are totally unfit for the class of work under consideration.

There is one paragraph in your correspondent's letter to which I take exception. He states that it is "a trivial matter for an architect as regards expense, to send out several sets of drawings and specifications," and I would like him to understand that it is just as "costly and aggravating" as for builders to prepare a tender with no chance of success.

If your correspondent thinks he is not getting a fair deal, he should refuse to tender.

T. W. T. RICHARDSON

The I.A.A.S.

SIR,—During the hearing of Payne *v.* Marshall in the King's Bench Division, a report of which appears in THE ARCHITECTS' JOURNAL of July 1, the following dialogue occurred :

Defendant : I am a Fellow of the Incorporated Association of Architects and Surveyors.

Sir Reginald Coventry, K.C. : Is that what was called in Parliament a mushroom institution ?

The question, which I myself, of course, had no opportunity of answering, and the innuendo, which I had no opportunity of controverting, merely represent a repetition of a derogatory and unjustifiable statement made in the House of Commons by a member of Parliament. The day after it was made, I invited the member in question to call here and either to substantiate or withdraw his remark. He never came. I have extended to Sir Reginald Coventry the same invitation which I extended to the member of Parliament whose fallacious observations the former saw fit to quote.

G. B. J. ATHOE
(SECRETARY, THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

External Cement Rendering on Brickwork

SIR,—There has been a good deal of information lately on the subject of cement stucco; the comparative advantages of this and cavity walls have been discussed with amazing differences of opinion. A particular case which came to my notice may be of interest.

I had to examine a house which was built some four years ago. It was built of 13½-in. brickwork, rendered externally with Portland cement, finished in white cement (3 and 1). There was some crazing to this stucco on the house, mostly slight, but with one or two bad cracks. There were, however, some courtyard walls rendered in the same way both sides, and it was noticeable that in each case these had crazed and cracked to a very much greater extent. I decided to hack the rendering off one of these walls so that we could examine the actual condition, and this is what I found :

1 : The crazing appeared to be in nearly all cases in the white stucco only.

2 : That in some few places the salts from the brickwork had prevented the cement from adhering, but that

3 : Generally the rendering was very hard and adhered very firmly to the bricks, so much so that, in hacking it off, the face of the bricks sometimes came off with the rendering.

4 : That the whole wall was saturated despite a damp course and a coping, the driest part being under the coping.

It seems evident therefore that at any rate in exposed positions rain will get through an ordinary good cement stucco, and that, brickwork being more absorbent, the water is drawn inwards. When the wall is rendered on one side only, the damp presumably evaporates on the other side, but when as in this case the wall happens to be rendered on both sides, there is no outlet, for, though the natural forces may drive the water through the rendering, the drying elements are not strong enough to pull it out again.

It would appear, therefore, that a semi-impervious external coating is worse than no coating at all, and that if a stucco is wanted it should be either entirely impervious (such as a painted stucco) or more porous, such as of lime plaster, which will allow moisture to dry outwards in spells of dry weather.

H. D.

Standardize Empire Timber!

SIR,—The notes of the Science Standing Committee on European Oak in the *R.I.B.A. Journal* raise the whole question of timber specification. How is the architect to be certain that he will get what he wants, or that a clearly-written description will not convey to the builder or timber merchant some totally different impression? If "English oak" does not mean English, what does it mean ? asks the architect, only to receive from the timber merchant the reply that it indicates a species of wood, common throughout Northern Europe, known botanically as *quercus robur pedunculata.* If the bewildered architect, greatly daring, protests that he also specifies "Austrian oak," he will be yet further abashed by the answer that Austrian is in reality a Hungarian timber and is indistinguishable from oak exported from many parts of Russia.

It is high time that something was done about it. *The Empire Forestry Association Handbook, 1930,* gave the most serious attempt yet made at commercial standardization. The U.S.A. have gone farther and refuse the title walnut to any but wood of the genus *juglans,* thus excluding from this class the African and Queensland woods commonly known as walnut; and since 1926 only trees of the family *meliaceae* may be called mahogany. Professor Chalk of the Imperial Forestry Institute, Oxford, has pointed out that the pendulum may swing too far, and that it is no harm to include under a general name timbers possessing similar physical and mechanical properties. At the present time much of the timber from Africa is marketed under names which do not in the least indicate the qualities of the woods and are at times quite misleading. Fancy names are useful for selling purposes but tend to confusion, a good example being white chuglam, which is the sap wood of *terminalia bialata,* the same tree as silver greywood.

The more Empire timbers are imported the greater will become the confusion unless some conference can agree and publish a standard nomenclature, familiar to all who have to deal in timber. LL. E. WILLIAMS

SOUTHWARK CATHOLIC RESCUE OFFICES

DESIGNED BY HUGHES AND STOTT

A general view of the offices, from Westminster Bridge Road, showing the bas-relief panel over the corner entry.

THE point where St. George's Road runs out of Westminster Bridge Road is the beginning of the Pilgrims Way to Canterbury. Hereabouts there stands the Cathedral House of St. George's R.C. Cathedral. The whole of this triangular site is now the property of the diocese; and the first sign of the changes that are contemplated can be seen in the erection of the new offices for the Southwark Catholic Rescue Society at the corner of Barbel Street.

The architects planned a three-story building, erecting just sufficient to meet the needs of the Society at present, and allowing for future extension; a link being also provided at the Barbel Street end for future development when the existing houses are demolished.

In view of the irregular shape of the site, the main entrance was placed directly on the corner, with the offices facing Barbel Street, having the board room directly over. The secretary's room was placed on the corner on the first floor with the view to Westminster Bridge Road, and the interview and reception rooms were arranged at that end, the hall and staircase being planned to take up the irregularities still remaining. In this way the largest number of regular rooms was obtained, at the same time masking the irregularity of the area.

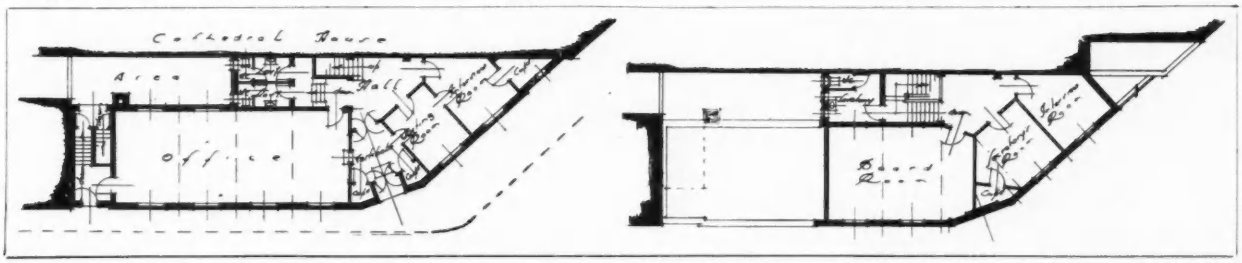
It was necessary to respect certain important lights in Cathedral House at the rear; and the area provided allows for this, as well as affording light and cross-ventilation to the new building.

The building was erected as a steel-framed structure, encased in brickwork. Prudent economy was the prime consideration; the second was a building which, while providing for a secular purpose, would take its place comfortably beside its taller and more austere grandmother; the third was to clothe the ground floor facing the street with a material that could not be easily disfigured by the scribblings of children. Thin glazed grey-mottled terra-cotta slabs were therefore chosen, the walls over being in ordinary London stock facings in keeping with the surrounding work.

The religious association of the building is expressed in the fine bas-relief panel of "The Mother and Child," executed in Portland stone, over the corner entry, by Mr. P. Lindsey Clark, A.R.B.S. A decorative relief is formed in the string course in rosary beads, divided in regular decades of beads between the openings, the principal beads being picked out in red roses. To complete the motif, the wrought-iron grille is fashioned on simple lines radiating from a central heart.

The windows are built up of standard steel domestic casements in stout wood frames, the circular heads to windows alone being purpose-made. The key-stones in Portland stone and copings in artificial stone provide a further relief in texture to the street front.

The ground-floor vestibule and the lavatories are laid in terrazzo to floors and dados. The ground-floor rooms are covered in plain lino. The first-floor rooms are finished in oak wood blocks, the hall and staircase being covered in rubber.



Sketch plans of the ground and first floors. The secretary's and board rooms are on the first floor, over the working office accommodation. The building has been planned with future extensions in view.

TO THE YOUNG ARCHITECT IN AMERICA

BY FRANK LLOYD WRIGHT

TODAY the young man I have in mind hears much, too much, about new and old. Sporadic critics of the "new" take their little camera-minds about—(snapshot emulation by the half-baked architect)—and wail, or hail the dawn. If by chance the novice builds a building the cackling, if not the crowing, outdoes the egg. Propagandists, pro and con, classify old as new and new as old. Historians tabulate their own oblique inferences as fact. The "ites" of transient "ists" and "isms" proclaim the modern as new. And yet architecture was never old and will ever be new.

From architecture, the main current, little streams detach themselves, run a muddy course to be re-gathered and clarified by the great waters as though the little rills and rivulets had never been. All art in our time is like that, and we witness only the prodigal waste Nature sponsors when she flings away a million seeds to get a single plant—seeming in the meantime to enjoy her extravagance.

Nature's real issue, no doubt, in the life of the mind is no less wasteful, and she may enjoy her extravagance in the million fancies for one idea: millions of cerebrations for one thought: a million buildings for even one small piece of genuine architecture. Yes, she gives gladly a million for one now, because the species has declined five hundred years to the level of a commercially expedient appliance. The species itself, you see, is in danger. So be glad to see as evidence of life the babel of personal books, the dereliction of æsthetic movements—especially be glad to see the half-baked buildings by the novitiate.

But confusion of ideas is unnatural waste of purpose. Such confusion as we see means a scattering of aim Nature herself would never tolerate. The confusion arises because there is doubt in some minds and fear in some minds and hope in other minds that architecture is shifting its circumference. As the hod of mortar and some bricks give way to sheet-metal, the lockseam, and the breaker,—as the workman gives way to the automatic machine,—so the architect seems to be giving way either to the engineer, the salesman or the propagandist.

I want to assure you that the circumference of architecture *is* changing with astonishing rapidity, but that its *centre* remains unchanged. Or am I only to reassure you that architecture eternally returns upon itself to produce new forms that it may live on for ever?

AMERICAN WORK THE WORLD ADMIRES

Except in a few instances the only buildings we have today approaching architecture are the industrial buildings built upon the basis of common sense: buildings built for the manufacturer who possessed common sense or buildings for residence built to meet the actual needs without abject reference to the "higher-ups"—nor with foolish, feathered hat in hand to "Culture." These sensible works we possess and the world admires, envies and emulates. This American of common sense, is today the only "way out" for America. He is still the only architectural asset America ever had or has. Give him what he needs when he needs it.

To find out what he needs go whenever and wherever you can to the factories to study the processes in relation to the product and go to the markets to study the reactions. Study the machines that make the product what it is. To acquire technique, study the materials of which the product is made, study the purpose for which it is produced, study the manhood *in* it, the manhood *of* it. Keep all this present in your mind in all you do, because ideas with bad technique are abortions.

In connection with this matter of "technique" you may be interested to know that the *beaux-arts* that made most of your American progenitors is itself confused, now likely to reinterpret its precepts, disown its previous progeny and disinherit its favourite sons or be itself dethroned, since posterity is already declining the sons as inheritance: the sons who enabled the plan-factory to thrive, the "attitude" to survive in a sentimental attempt to revive the dead. Yes, it is becoming day by day more evident to the mind that is a mind how shamefully the product of this culture betrayed America. It is beginning to show and it shames America.

At our architecture as "Culture" quite good-naturedly the Old World laughs. Coming here expecting to see our ideals becomingly attired, they see us fashionably and officially ridiculous, by way of assumption of customs and manners belonging by force of nature and circumstances to something entirely different. They see us betraying not only ourselves but our country itself. But now by grace of freedom we have a little otherwise to show to command dawning respect.

No, young man, I do not refer to the skyscraper in the rank and file as that something nor does the world refer to it, except as a stupendous adventure in the business of space-making for rent—a monstrosity. I again refer you to those simple, sincere attempts to be ourselves and make the most of our own opportunities which are tucked away in out-of-the-way places or found in industrial life as homes or workshops. Our rich people do not own them. Great business on a large scale does not invest in them unless as straightforward business buildings where "Culture" is no consideration and columns can give no credit.

American great-wealth has yet given nothing to the future worth having as architecture or that the future will accept as such unless as an apology. In building for such uses as she had, America has made shift with frightful waste.

WHERE THE FUTURE LIES

Though half the cost of her buildings was devoted to making them beautiful as architecture, not one thought-buils structure synthetic in design hat American great-wealth, and even less American factotumized "learning," yet succeeded in giving to the modern world. American wealth has been "sold" as it has, itself, bought and sold, and been delivered over by professions, or the Scribes, to the Pharisees. So, young man, expect nothing from the man of great wealth in the United States for another decade. Expect nothing from your government for another quarter of a century!

Our government, too (helpless instrument of a majority hapless in art), has been delivered over to architecture as the sterile hang-over of feudal thought, or the thought that served the sophist with the slave. That is why the future of architecture in America really lies with the well-to-do man of business,—the man of independent judgment and character of his own, unspoiled by great financial success—that is to say, the man not persuaded, by winning his own game, that he knows all about everything else.

Opportunity to develop an architecture today lies with those sincere and direct people, who, loving America for its own sake, live their own lives quietly in touch with its manifold beauties—*blessed by comprehension of the ideal of freedom that founded this country*. In our great United States, notwithstanding alleged "rulers" or any "benign" imported cultural influences, these spontaneous sons and daughters are the soul of our country; they are fresh, unspoiled life, and therefore they are your opportunity in art, just as you, the artist, are their opportunity. You will be their means to emerge from the conglomerate "in between."

THE APPLIANCE AND LIFE

Architecture expresses human life, machines do not, nor does any appliance whatsoever. Appliances only serve life.

Lack of appreciation of the difference between the appliance and life is to blame for the choicest pseudo-classic horrors in America. And yet our more successful " modern " architects are still busy applying brick or stone envelopes to steel frames in the great American cities. Instead of fundamentally correcting this error, shall any superficial æsthetic, disguised as new, enable this same lack of appreciation of the principles of architecture to punish us again this time with a machinery abstract, which will be used as an appliance of the appliance of another cycle of thirty years? If so, as between architecture as sentimental appliance and architecture as mechanical appliance, or even the æsthetic abstract itself as an architectural appliance, it would be better for America were you to choose architecture as the mechanical appliance.

But, then, organic architecture would have to keep on in a little world of its own. In this world of its own the hard line and the bare upright plane in unimaginative contours of the box both have a place—just as the carpet has a place on the floor, but the creed of the naked stilt—as a stilt—has no place. The horizontal plane gripping all to earth comes into organic architecture to complete the sense of forms that do not " box up " contents but imaginatively express space. This is modern.

In organic architecture the hard straight line breaks to the dotted line where stark necessity ends and thus allows the appropriate rhythm to enter in order to leave suggestion its proper values. This is modern.

In organic architecture, any conception of any building as a building begins at the beginning and goes forward to incidental expression as a picture and does not begin with some incidental expression as a picture and go groping backward. This is modern.

Eye-weary of reiterated bald commonplaces wherein light is rejected from blank surfaces or fallen dismally into holes cut in them, organic architecture brings the man once more face to face with Nature's play of shade and depth of shadow, seeing fresh vistas of native creative human thought and native feeling presented to his imagination for consideration. This is modern.

The sense of interior space as reality in organic architecture co-ordinates with the enlarged means of modern materials. The building is now found in this sense of interior space; the enclosure is no longer found in terms of mere roof or walls but as " screened " —space. This reality is modern.

In true modern architecture, therefore, the sense of surface and mass disappear in light, or fabrications that combine it with strength. And this fabrication is no less the expression of principle as power - directed - toward - purpose than may be seen in any modern appliance or utensil machine. But modern architecture affirms the higher human sensibility of the sun-lit space. Organic buildings are the strength and lightness of the spider's spinning, buildings qualified by light, bred by native character to environment—married to the ground. That is modern !

CONCERNING WAYS AND MEANS

Meanwhile, by way of parting moment with the young man in architecture, this he should keep concerning ways and means :

1 : Forget the architectures of the world except as something good in their way and in their time.

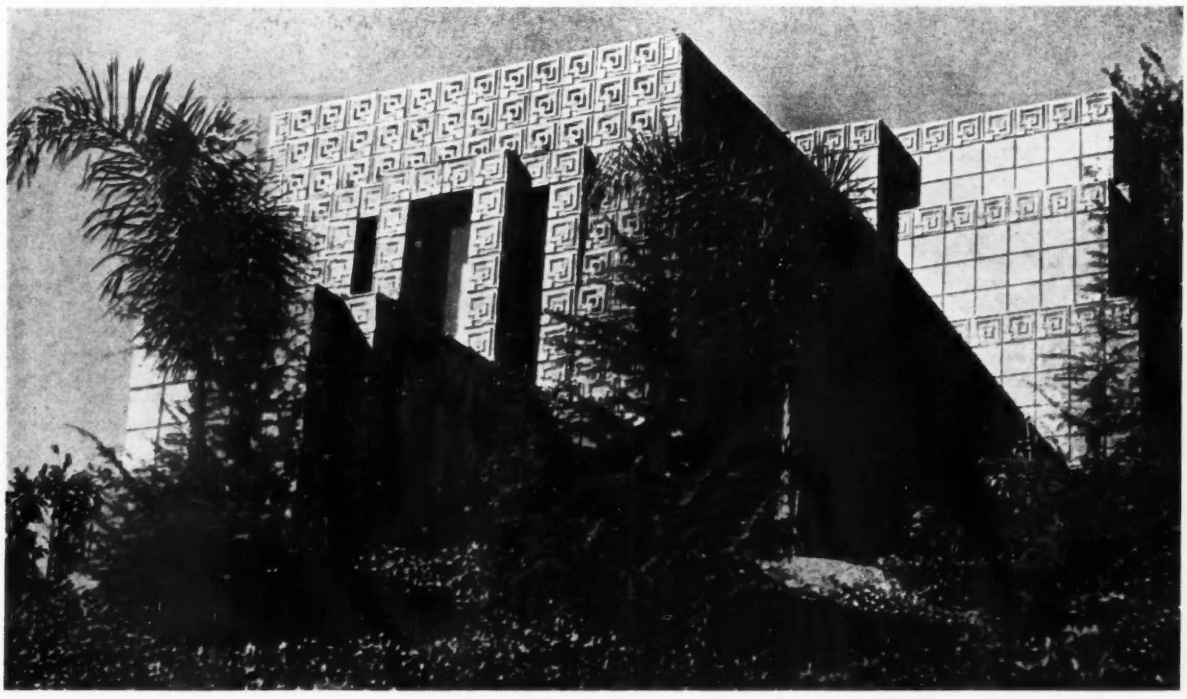
2 : Do none of you go into architecture to get a living unless you love architecture as a principle at work, for its own sake—prepared to be as true to it as to your mother, your comrade, or yourself.

3 : Beware of the architectural school except as the exponent of engineering.

4 : Go into the field where you can see the machines and methods at work that make the modern buildings, or stay in construction direct and simple until you can work naturally into building-design from the nature of construction.

5 : Immediately begin to form the habit of thinking " why " concerning any effects that please or displease you.

6 : Take nothing for granted as



Residence in California constructed with a double wall of concrete blocks with insulating air space.

beautiful or ugly, but take every building to pieces, and challenge every feature. Learn to distinguish the curious from the beautiful.

7: Get the habit of analysis; analysis will in time enable synthesis to become your habit of mind.

8: "Think in simples," as my old master used to say—meaning to reduce the whole to its parts in simplest terms, getting back to first principles. Do this in order to proceed from generals to particulars and never confuse or confound them, or yourself be confounded by them.

9: Abandon as poison the American idea of the "quick turnover." To get into practice "half-baked" is to sell out your birthright as an architect for a mess of pottage, or to die pretending to be an architect.

10: Take time to prepare. Ten years' preparation for preliminaries to architectural practice is little enough for any architect who would rise "above the belt" in true architectural appreciation or practice.

11: Then go as far away as possible from home to build your first buildings. The physician can bury his mistakes, but the architect can only advise his client to plant vines.

12: Regard it as just as desirable to build a chicken-house as to build a cathedral. The size of the project means little in art, beyond the money-matter. It is the quality of character that really counts. Character may be large in the little or little in the large.

13: Enter no architectural competition under any circumstances except as a novice. No competition ever gave to the world anything worth having in architecture. The jury itself is a picked average. The first thing done by the jury is to go through all the designs and throw out the best and the worst ones so that, as an average, it can average upon an average. The net result of any competition is an average by the average of averages.

14: Beware of the shopper for plans. The man who will not grubstake you in prospecting for ideas in his behalf will prove a faithless client.

It is undesirable to commercialize everything in life just because your lot happens to be cast in the machine-age. For instance, architecture is walking the streets today a prostitute because "to get the job" has become the first principle of architecture. In architecture the job should find the man and not the man the job. In art the job and the man are mates; neither can be bought or sold to the other. Meantime, since all we have been talking about is a higher and finer kind of integrity, keep your own ideal of honesty so high that your dearest ambition in life will be to call yourself an honest man, and look yourself square in the face. Keep your ideal of honesty so high that you will never be quite able to reach it.

Respect the masterpiece; it is true reverence to man. There is no quality so great, none so much needed now.

[The foregoing extracts are from "To the Young Man in Architecture," one of *Two Lectures on Architecture* by Frank Lloyd Wright, published by The Art Institute of Chicago, price 75 cents, post free. "In the Realm of Ideas" is the title of the other lecture in the booklet.]

QUESTIONS THAT ARISE

Finishing to Cement Dado

R. D. writes: "*I am troubled by the method used by some plasterers in forming a cement dado. This was specified as to be in cement and sand, ¾ in. thick (1 and 3) finished smooth from the trowel for future painting. The walling was rendered, scored over for a finishing coat, and the latter applied almost neat from the trowel to a thickness of less than ⅛ in. Whilst in this manner a smooth surface is easily obtainable, is there a possibility of this fining coat cracking?*"

To obtain a smooth face with cement and sand, composed 1 and 3, a considerable amount of energy is necessary on the part of the plasterers. With this object in view, nine out of ten plasterers prefer to apply a finer coat as a finishing. Neat cement, of course, should not be used, nor any mixture not containing a proper proportion of sand.

There is no objection to finishing this type of work in the manner as executed for "rendering," but the composition of the final coat should be 1 part of cement and 2 parts of well-washed sand.

It is also of importance that the first coat should be well wetted before application of finishing coat. W. A. D.

Clerk of Works' Office

H. T. writes: "*Has any reader experienced trouble with a builder regarding the description in the specification of a clerk of works' hut? I specified that the builder was to provide a suitable office with necessary heating, lighting and a bench with three drawers. The trouble, however, is with the size. The builder has informed my clerk of works that an office 8 ft. by 8 ft. would be of sufficient area to meet all requirements, but the clerk of works suggests that 100 sq. ft. of floor space is necessary. Does the wording 'a suitable office' cover this?*"

It is very strange to hear of any difficulty being experienced in connection with the erection of a clerk of works' office, for the builder is usually only too glad to fall in with the wishes of the clerk of works, especially at this early stage.

Probably in this case the builder has a portable hut among his plant which he has used for another job, and is therefore keen to save labour and materials by erecting this.

If your correspondent had added that the office was to be to the satisfaction of the architect, he would have been sufficiently covered, but I consider that it is fairer all round if the area required is given in the specification.

On a job lasting for twelve months 12 ft. by 8 ft. would be a very convenient size. It allows a bench for the whole length of one side, and gives plenty of room, when, say, four people are discussing a detail opened out on the bench. C. OF W.

Stained Woodwork

J. R. writes: "*All the interior woodwork of a private residence I have in hand is of Austrian oak. My client wishes it slightly stained and afterwards wax-polished. I shall be much obliged if you would recommend a suitable type of stain and a mixture for the wax-polish.*"

I advise your correspondent to try out test pieces in the two following ways:

1: Apply a weak solution of caustic potash; the solution might be made of more than one strength by adding different amounts of water to the original solution; the weaker it is, the less the staining of the wood. When dry, sponge over with a weak vinegar solution; again, when dry, rub down with fine glass paper if the grain has been raised, and then wax polish. This waxing may be done *a*: by using a lump of hard white wax on which a stiffish brush (of boot-polishing type) is rubbed to take up the wax and then in turn rubbed on the oak. *b*: Make up a paste of beeswax dissolved in No. 1 petrol, rub on with a rag and then polish off with a cloth and soft brush.

It should be noted that if this method of staining be adopted, it must be remembered that its success depends on the oak being all of the same kind and preferably from the same batch of boards. The use of English, Japanese, or other kind mixed in with the Austrian would be apparent, as caustic soda acts differently upon each type of oak.

2: Use a light grey-brown tone of stain. This should be laid on with a soft painter's brush and contains its own wax polish, so that when dry it will polish up under a cloth or soft brush without the addition of further wax; although after a month or so a light application of small quantities of wax-polish will enhance the shine if considered advisable. Usually, however, it is left alone and only rubbed over occasionally with a dry cloth. J. C. R.

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type vii. West Country

BY PERCY F. WARREN

THE West Country is exceedingly rich in buildings of architectural merit, built almost exclusively of stone, and roofed with either thatch or stone tiles; and the Tudor influence is very strongly marked. The following outline specification describes a pair of cottages recently built on the borders of Somerset and Dorset to house servants employed at an old Tudor country house, recently altered and added to.

SPECIFICATION

WALLS

The external walls are to be 18 ins. in thickness for the full height, upon a cement concrete foundation, 2 ft. 6 ins. wide by 9 ins. in thickness, built in roughly-squared random-coursed Ham Hill stone, bedded and set in mortar composed of one part ground lime to two parts of Morton sand, so that a cream-coloured mortar is obtained.

The stones are to be roughly squared on bed and perpends and roughly hammered on face. The stones are to be walled in the mortar and the joints are to be compressed, raked out with a stick and brushed with a stiff brush when the mortar has partly set. All mortar is to be removed from the surfaces and edges of the stones and the mortar joints must be kept back.

Main angles and jambs to windows and doorways to be hammer-dressed.

The party wall is to be built in brickwork in lime mortar, and the 4½-in. internal walls in cement mortar.

LINTOLS

The lintols over the doors and window openings in the external walls are to be in English oak with sawn face, 6 ins. deep and 5 ins. on soffit and, behind these, reinforced concrete lintols 13 ins. on soffit by 12 ins. deep.

THATCHING

The whole of the roofs are to be thatched with unthrashed wheat straw. The thatch is to be 15 ins. thick and laid to the pitch shown on the drawings in short bundles, the straw ends only showing, and thatching carefully formed round the hips, ridges, valleys and chimney-stack, and sewn on with tarred line to 1¼-in. by 1-in. sawn red fir horizontal laths, 8 ins. apart, securely spiked to the counterlaths under.

The eaves and gable ends are to be neatly clipped off and dressed up and wired with ½-in. G.I. netting, pegged with hazelwood pegs.

Provide and fix two lines of "runners" along the eaves and verges, formed by splitting hazel rods from end to end, the rods being about 6 ft. long by ¾ in. diameter, fixed flat on the surface of the thatch with pegs made in a similar manner, twisted and bent in the middle to the shape of a hairpin, pushed into the thatch astride the runners at intervals of 12 ins. and secured firmly to laths. Put two similar lines of runners to ridges.

The bottom row of thatch at the eaves and also along the verges to be laid with a double thickness of straw.

WINDOWS

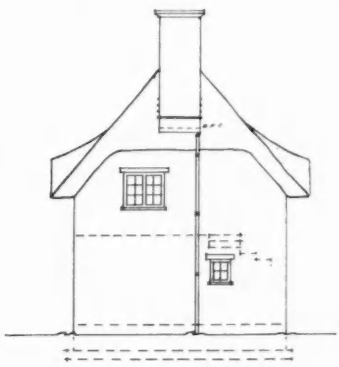
The West Country is subject to very severe driving rains, and extra precautions must be taken to exclude the weather. The windows are to be casements having 4-in. by 3-in. wrought, rebated and water-grooved deal frames and mullions, and 7-in. by 5-in. twice-sunk weathered and throated English oak sills. The casements are to be 1¾ ins. thick, rebated for glazing and water-grooved on all edges, divided into panes with 1¼-in. twice-rebated glazing bars.

FITTINGS

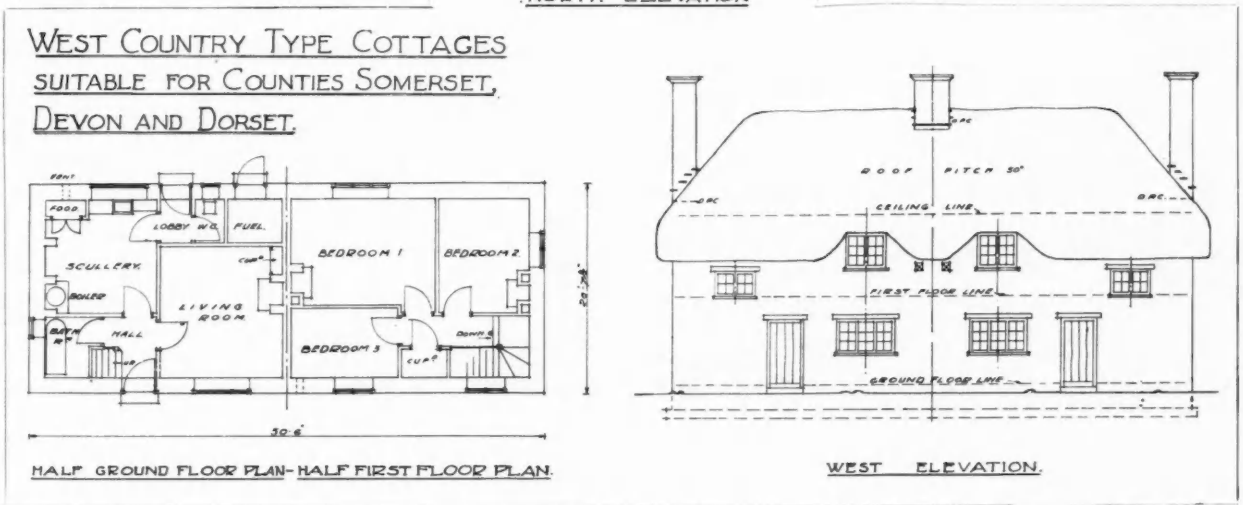
A modern type of combination cooking grate should be provided and fixed in the living-room, and a small portable cooking range in the scullery.

The washing boiler should be fixed upon a concrete platform in the scullery, so that the complete contents thereof can gravitate to the bath in the bathroom adjoining by means of a pipe connected from the boiler to the hot-water tap on the bath.

NO one who has supervised cavity-wall construction, using the ordinary twisted fish-tail metal ties, can be unaware of the perfunctory clearing of the ties from mortar droppings which usually occurs. Since without such clearing the whole purpose of hollow-wall construction is liable to be defeated, and it is probably only by sheer luck that a large proportion of such work appears to fulfil its purpose, any improve-



NORTH ELEVATION



Drawing to illustrate the accompanying specification, prepared by Percy F. Warren.

ment which is likely to reduce risk of "bridging" will be welcome. Such claims are made for a new knife-edged tie. It appears likely that improvement would be secured by its use, though a practical test is the only means of proving it. The slightly bevelled corners on the underside may, however, prove insufficient to prevent water travelling across from one wall to the other as claimed, as a very slight extension of the mortar joint would close the gap. A better form for the bottom of the vertical centre part would be an angular one, having a central apex below to encourage dripping, and this would, moreover, accentuate the difference between top and bottom of the ties and make it less difficult for careless workmen to reverse them in use. EDWIN GUNN

Light-weight Bricks and Blocks

THE demand for bricks and blocks of much less than the normal weight has greatly increased during the past few years. This is due to the extended employment of panelling materials, which do not have to carry the superincumbent structure but are only required to fill the spaces between the structural members. When light panels can be used, the supporting members can be slighter and a considerable saving in the cost of materials and erection is thereby effected.

Another very important use of light-weight bricks and blocks is for insulation against heat, cold, or even sound. They are invaluable for retaining the heat in furnaces instead of allowing it to radiate into the atmosphere and be lost. Equally valuable are they in refrigerators, where they serve the opposite purpose and prevent external heat from gaining access to the cool chamber. Light-weight bricks and blocks are also used to prevent sounds being heard outside the room in which they are produced. For this purpose they are largely used for partitions and in the construction of audition chambers, telephone boxes, hotels, and private houses. In fact, they are now used for so many purposes that an extensive industry is occupied in their rapidly-increasing production. Some of these articles, whilst of first-class quality and serving certain purposes admirably, are useless for others. Blocks of one type would be needlessly expensive for some purposes, but are highly resistant to weather, and so are invaluable for exposed positions.

Many thousands of light-weight blocks are now used for building partition walls in existing buildings—particularly in the conversion of large houses into flats. Such blocks are used under almost ideal conditions, and so can be made of materials having a maximum lightness and sound-proofness, whereas blocks and bricks used for exterior work must necessarily be of greater relative weight in order that they may withstand exposure. It is, therefore, of great importance to select bricks or blocks made of suitable materials, and not to place too much emphasis on mere "lightness" when the goods have to withstand exposure to the weather. It may appear needless to mention what seems so obvious a matter, but the fact that complaints have been made because blocks intended for interiors have been used for external work shows that caution is needed.

CLASSIFICATION

Light-weight bricks and blocks may be arranged in three groups or classes :

a : Those containing a large proportion of clay and resembling ordinary building bricks in most respects except weight.

b : Those made of some light-weight material, the particles of which are united by a mineral cement, such as Portland cement or sorel (magnesium oxychloride) cement, or, in some cases, by clay, in which case the articles must be heated in a kiln. This is not necessary when Portland or sorel cement is used.

c : Those made of plaster and fibre, or of wood or other material which cannot withstand a high temperature or prolonged exposure to the weather.

The first group includes all the materials which are practically fireproof and capable of resisting the weather for many years. The articles in the second group are not really fireproof, though they possess some power of resistance to fire and to the weather. They are only suitable for interior work except in sheltered places or very mild climates. The materials in the third group are extremely light, but they are inflammable and not resistant to weather. They can, therefore, only be used for interior work.

CLAY PRODUCTS

The materials in the first group are much more varied than those in the other groups. They owe their lightness to ingenious methods of introducing air into the texture of a porous material, such as a brick, so as to retain all the important properties of the material and yet reduce its weight (figure one). To be able to do this successfully is much more remarkable than is generally realized, and it is not accomplished without considerable skill. Failure to recognize the technical difficulties involved has led to severe losses by some manufacturers and to many disappointed users.

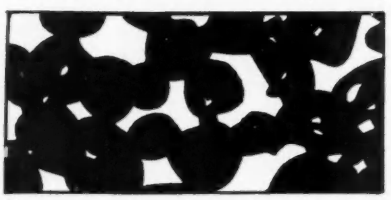


Figure one : Magnified section of porous brick.

The simplest means of making light-weight bricks, using clay as the principal material, is to mix as much sawdust as possible with the clay of which ordinary bricks are made, and then to proceed with the manufacture of the bricks in the ordinary way. During the heating of the bricks in the kiln, the sawdust will burn out, leaving a "pore" in place of each particle of sawdust. If, for instance, a volume of sawdust particles equal to 30 per cent. of the volume of the brick can be introduced, the porosity of the brick would be increased by 30 per cent. (by volume). Instead of sawdust, other materials such as flour, ground meal of various kinds, coke, "waste" chemicals, such as naphthalene, and, in short, any powder which will burn away completely in the brick kiln without damaging the bricks, may be used. Very coarse particles, such as some kinds of seeds, are not desirable, as small pores are preferable to large ones, and small pores require the use of small particles of added matter. Softwood sawdust is largely used, but its particles are usually much larger than those of hardwood sawdust, so that the latter would be preferable. Unfortunately hardwood does not burn as readily as softwood, and its use introduces various complications. It is unfortunate that the addition of pore-forming substances is greatly restricted by the plasticity or binding power of the clay. For this reason, only a relatively small increase in porosity can be secured by this means.

PERFORATED BRICKS

Another means of increasing the proportion of air space to solid matter in bricks is to make them with a large number of very small perforations (figure two). These are not made by drilling holes into the finished brick, but are produced automatically when the bricks are being shaped. English brick manufacturers have not developed this type of brick very fully, and have been content to make bricks with not more than about twenty $\frac{1}{2}$-in. holes. On the Continent, bricks with 200 perforations are made; indeed, so numerous are the perforations that it is surprising that the bricks retain their strength !

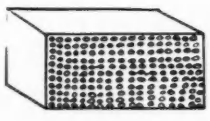


Figure two : Perforated brick. The spaces are automatically formed in the process of shaping the clay.

HOLLOW BLOCKS

Another method consists in making one or more large passages longitudinally through the bricks or blocks, thereby producing "hollow blocks" (figure three) or "hourdis." Such

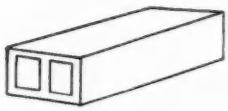


Figure three: A typical hollow block, which may have "walls" five-eighths of an inch in thickness.

blocks may conveniently be made as large as four or even eight ordinary bricks, but with only one quarter of the relative weight. If the blocks are well designed, they can have "walls" and a centre partition, $\frac{5}{8}$ in. thick, and hollow spaces each $1\frac{5}{16}$ ins. wide, thereby producing the equivalent of a $4\frac{1}{2}$-in. wall with only $1\frac{7}{8}$-in. solid matter—a reduction of nearly 50 per cent. of the weight of blocks, 12 ins. square and $4\frac{1}{2}$ ins. thick.

Hollow blocks are quite safe for ordinary building purposes, as solid bricks are ten times stronger than the crushing strength of walls built of them, the mortar being the weak part in a wall. There is no ground for the fear, sometimes expressed, that a hollow wall cannot withstand the pressure of the blocks above it.

Hollow blocks are made of many different patterns and sizes so as to suit various requirements. Some users prefer the hollow portions to be vertical, and suggest that horizontal flues form runways for mice and other vermin which would be stopped by vertical flues. Ingenious devices are used to keep the blocks in position, the commonest being to form grooves on the tops and bottoms of the blocks, so that these grooves engage with those on other blocks and produce "tongue-and-groove" joints. In some blocks, the mortar placed in grooves forms a seal and bond.

The great problem with many hollow blocks is the production of end-blocks and closers. The simplest procedure is to use end-blocks of special shapes, designed so as not to show the hollow portion when they are in position in the wall.

An alternative method is to turn the end block vertically and cut it to the required height. Closer blocks must usually be made specially, as without them the other blocks will not "break joint" satisfactorily. These problems are for the manufacturer rather than the user, but the latter must not overlook them or he may find himself in a difficulty.

CAVITY BRICKS

Recently, a well-known firm of brick manufacturers have supplied what they term "cavity bricks," which may be regarded as ordinary bricks with a large cavity scooped out of them, or, alternatively, as bricks with an abnormally large "frog." These bricks weigh only about $5\frac{1}{2}$ lbs., and are therefore advantageous for use in panel work. They are sometimes regarded as being handier than hollow blocks, though that is, necessarily, a matter of opinion.

DIATOMITE BLOCKS

Bricks and blocks of very low weight may also be made by means of *hollow particles* united by a cement or by clay. The most popular material of this kind is known by various names, such as Kieselguhr, diatomite, moler, and diatomaceous earth (figure four). The

Figure four: Representative shapes of diatom skeletons, as revealed by the microscope.

differences between these substances are not important for most purposes, but are serious in a few cases. The particles are the skeletal remains of diatoms and similar creatures, and consist of hollow particles of many sizes and shapes, the "walls" of each particle being so thin as to require a powerful microscope to enable them to be seen. Bricks and blocks made of Kieselguhr or similar material are exceedingly light in weight, have great sound- and heat-insulating powers, and if bonded with suitable clay they have a high fire-resisting power. Such articles may be made in the form of either solid or "hollow" blocks; the latter are preferable where conditions permit, as their insulating powers are increased by the large hollow portions in association with the high porosity.

PUMICE BLOCKS

Pumice—one of the constituents of volcanic lava—and tuff, which is of similar origin, are highly porous materials. If they are not ground too finely (which would destroy their porous structure), they are very suitable for the production of light-weight blocks.

It is difficult to use clay as a bond for pumice, as the mixture is very easily distorted when in the kiln, but Portland cement or sorel (magnesium oxychloride) cement can be used with satisfactory results. Pumice blocks sawn from the natural material are occasionally used. Most pumice and tuffaceous blocks are less porous than those of diatomite, but more so than those made of clay and sawdust. They are chiefly used for interior work, where they have no serious weight to support.

PLASTER BLOCKS

When lightness and cheapness are by far the predominant factors, blocks made of fibre and plaster are often used, and for interior work they meet a great need. Such blocks are neither so strong nor so hard as others, but in many buildings hard walls are not necessary. The purpose of the fibre is partly to enclose air, and so reduce the ultimate weight, and partly to act as reinforcement to the plaster.

SELECTING BRICKS AND BLOCKS

When selecting light-weight bricks and blocks for any purpose, great care should be taken to ensure that all the desired properties are possessed in sufficient measure by the article selected.

It is useless to employ a plaster-fibre block for permanent use out of doors, though for temporary structures, such as exhibition buildings, it may be useful and satisfactory. On the other hand, it may be a needless expense to use Kieselguhr-clay blocks for a partition wall in the interior of a well-built structure where there is no likelihood of exposure to severe conditions.

For the conservation of heat in furnaces, Kieselguhr-clay blocks and bricks are unquestionably the best, but they must be protected on one side from excessive heat and on the other side from the weather.

For buildings with a steel skeleton and brick panels between the steel members, highly-porous blocks, cavity bricks, or hollow blocks are usually best, as they are exposed to the weather.

Interior partitions may usually be made of any kind of highly-porous material, but in some industrial buildings the effect of vibration or chemical vapours somewhat restricts the choice.

Hollow blocks made of clay are not so sound-proof as highly-porous ones, but are sufficiently good for many factory buildings where high sound-proofness is not required.

For some purposes there is no need to use porous blocks so long as the blocks employed are light in weight. In such cases a mixture of magnesium chloride, magnesia and sawdust may be satisfactory, or a partition of light wood, wallboard or lath and plaster may be used.

From the foregoing it will be realized that the right selection of suitable blocks for some purposes requires a detailed knowledge of the factors involved, as well as of the properties of the available blocks. Such blocks should not be chosen haphazard, but with care and skill.

When it becomes necessary, the requisite information can usually be obtained from the manufacturers of the blocks, though few firms will recommend a rival product when it is more suitable for a particular purpose than what they produce. For important work on a very large scale, independent advice should always be sought.

A. B. SEARLE

MODERN COTTAGES AND COUNTRY HOUSES

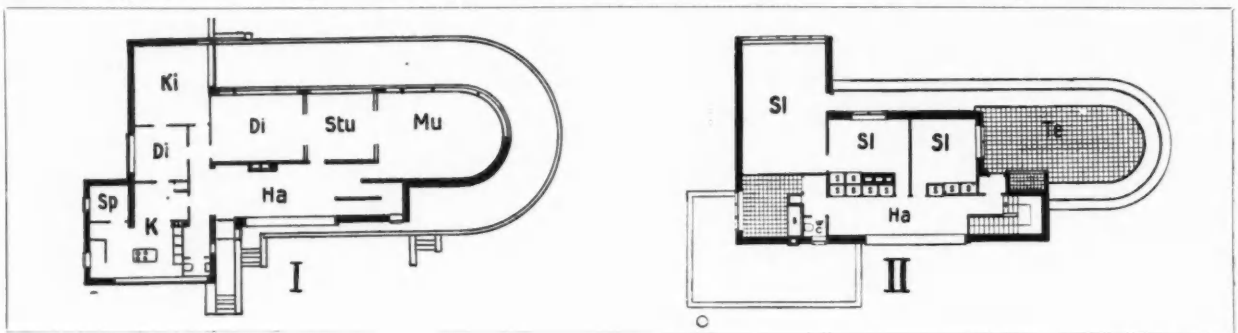
BY E. MAXWELL FRY

From Germany: Villa at Altona-Othmarschen. Karl Schneider, architect.

PROFESSOR J. G. WATTJES has looked over the country houses of Europe and America. His book is one of those international surveys that appear from time to time. It was his intention to make a record of the best achievement in country-house design in all parts of the world where the country-house idea is fairly understood. That best achievement he had hoped to represent as a unified twentieth-century style of building, but, as he says in his introduction, "neither the architecture of the country house nor modern architecture in general has brought that oneness in conception which had been hoped for and which was believed—and is still, by many—to be an essentiality."

This being true, we must accept the widely varying national and individual styles as representing the state of country-house architecture in Europe and America today. And we need not regret the variety which national needs and preferences bring to this collection of all talents. Architecture is an art, and requires that its practitioners shall be moved—and moved greatly—to create. National preferences and traditions being no mean, but rather grand, things may be therefore expected to provide some substantial part of the emotion of architecture, as we know them to have done with us in England. And national needs, the stress of natural conditions and weathers, are severe external moulders of architecture, producing the mighty eaves of Switzerland just as they have formed the gentle slopes of stone-slated Derbyshire roofs.

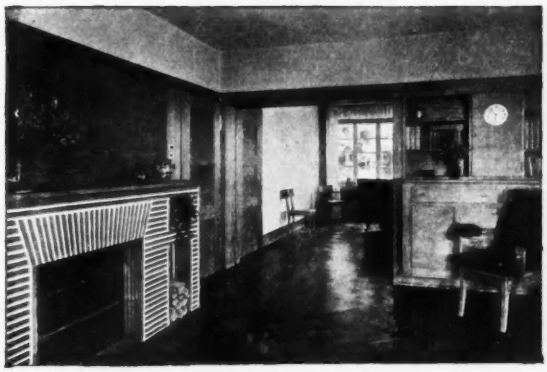
These things, tradition and natural circumstances, so long as they have meaning and bearing, will continue to affect design wherever they are properly understood and keenly felt; and architecture will not suffer. Where they are used as picturesque stock-in-trade, it



[*By courtesy of Kosmos, Amsterdam.*

Ground- and first-floor plans of the cottage illustrated above. Ha = hall; Di = dining-room; K = kitchen; Ki = nursery; Stu = study; Mu = music-room; Sl = bedroom; Te = terrace.

From Switzerland: Entrance front of the house illustrated also below.



The living-room of the Swiss house, looking towards the music-room.

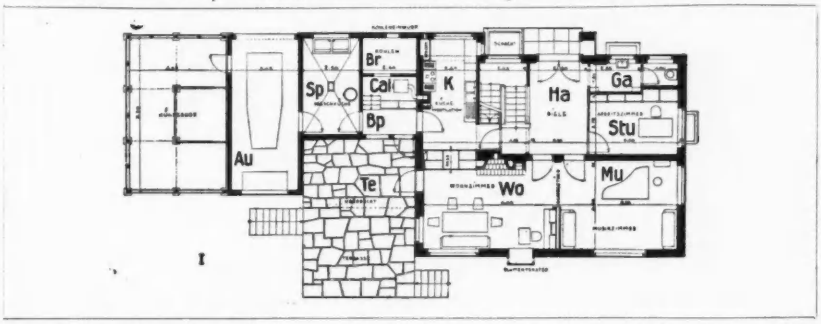
is time for the work of le Corbusier. Turning to the matter of the book itself, it is, of course, very exhilarating to look through such a collation of styles. Not only exhilarating, but definitely instructive.

After a time one begins to make some rough classification into houses that are built in a national tradition, houses that are definitely modern, and houses that are either freakishly national or very badly modern.

What strikes one particularly is the comparative simplicity of, say, the farm-country-house at Zürich, André Lurçat's house at Parc Montsouris, and Karl Schneider's house at Hamburg. The first is simply national, vigorously traditional, and good right through. The last two, as simple and straightforward, are created by emotions that cannot be said to owe very much to national-local conditions, and none to anything but the widest cultural traditions. The three are linked by the purity and vigour of their creation.

This book shows examples in nearly all European countries, architecture that has become as nearly international as bad Renaissance classic used to be, but how refreshingly clean and healthy beside it!

I find much of this architecture of the *avant-garde* too much a statement of new discovery and too little humanized; as though it were unable, under the



Ground-floor plan of the Swiss house. In addition to the references quoted on the preceding page, Wo = living-room; Ga = dressing-room; Br = fuel; Bp = store; Au = garage.

[*By courtesy of Kosmos, Amsterdam.*

From Switzerland: House at Ischnach, near Zürich. H. Hofmann, architect. The terrace front.

[*By courtesy of Kosmos, Amsterdam.*

Garden side of the villa at Altona-Othmarschen, also illustrated, with plans, on page 54.

stress of abstract thought, to allow admittance to the occasional, the kindly human touch. Perhaps this will come naturally as discovery gives place to more confident handling.

It must be obvious from these remarks that this book is interesting in an unusual degree. The photographs are excellent and are accompanied by small plans, not very readable. The text is printed in Dutch, French, German, and English. E. M. F.

Modern Cottages and Country Houses in Europe and America. By Professor J. G. Wattjes. Amsterdam: Kosmos.

LITERATURE

THE NATIONAL PHYSICAL LABORATORY'S REPORT

IF the annual report of the National Physical Laboratory serves no other purpose, it is a wholesome reminder of the important part which scientific research is playing today in industrial development.

As in previous years, the Report for the Year 1930 is not a detailed record of work and results, but a general statement of the work undertaken and in progress. Even in the 295 pages it occupies it would be impossible to do more than indicate the character and general application of the various researches and tests undertaken, including as they do heat and general physics, radiology, electrical standards and measurements, electrotechnics, wireless, photometry, metrology, engineering, aerodynamics and metallurgy. Scarcely an industry or profession but receives some assistance, either directly or indirectly. Often it takes the form of co-operation with some such institutions as the Building Research Board, the Roads Department of the Ministry of Transport or the British Engineering Standards Association.

It may be noted that, in order to simplify procedure and the correlation of test results, the testing and experimental work of the acoustic laboratories at the Building Research Station at Garston, near Watford, has been taken over by the Laboratory. A scheme has been agreed upon with the object of securing close liaison with the Building Research Station, particularly on questions of the structure of buildings or special architectural features.

In the matter of sound transmission, the range of test frequencies has been extended, and preliminary experiments are under way on the transmission of mechanical blows by partitioning. Various other researches in sound which have been undertaken have considerable practical interest. Other work of architectural interest includes researches on illumination, and we note that the construction of an experimental instrument for determining the glare effect in any actual lighting system has been completed. Street lighting experiments were conducted at Leicester in September last with eight different lighting systems, and the analysis and correlation of the results is expected to yield results of value.

Reference is made in the report of the Engineering Department to investigations upon wind pressures on structures and bridges, also upon concrete for road making. The actual results of many of the investigations mentioned have been, or will, in due course, be published in various special reports and papers. The present Report does little more than indicate the nature of the work. A. H. H.

The National Physical Laboratory Report for the Year 1930. London: H.M. Stationery Office. (For the Department of Scientific and Industrial Research). Price 12s. 6d. net.

THE SLUM: ITS STORY AND SOLUTION

"IN 1931 there is to be a new offensive against the slum. This book is for those who take part in it." Such is the opening of Major Barnes's latest contribution to the literature of the great cause of the abolition of the slum, in which he is himself a leader with notable qualifications—an architect and a housing expert, with inside experience of legislation both on the L.C.C. and in Parliament. He goes on to say: "In continuing the fight, nothing can be more heartening than to know there is an objective, that it is attainable, and that past struggle has brought it within reach. . . . Nothing more and nothing less than a separate dwelling for each family, with adequate accommodation, set in surroundings clean and comely."

The book falls into two parts: first, the history of the slum problem, and the efforts already made—and a knowledge of both is essential; and, secondly, the solution. The history falls into defined stages, marked by some great figure such as Chadwick, Shaftesbury or Octavia Hill.

The Royal Commissions and their evidence and results in legislation are specially dealt with. The earlier Acts refer to public health, and only later is the importance of housing realized, and that in its turn is related to Town Planning. The culminating Act of 1930 has put plenary powers into our hands, but the work is still full of delays and difficulties, and overcrowding continues to a scandalous degree. The root difficulty is poverty: though the problem of the uneconomic rent is partly solved by public expenditure. There still remain the cost of transport in time and money, the landlord and the vested interests, and the enormous practical difficulty of "decanting" or providing intermediate houses for the people while slum areas are being cleared and rebuilt. Some factories may take their workers into satellite towns, but there will always be certain classes who must live near their work in central positions, and these are often the poorest who need proper accommodation most.

The author advocates another Royal Commission and a detailed survey of the whole position in its various bearings, with a view to speeding up the application of powers which are only waiting to be enforced. E. K. D. H.

The Slum: Its Story and Solution. By Major Harry Barnes, F.R.I.B.A., F.S.I. London: P. S. King and Son, Ltd. Price 18s. net.

The Story of Architecture in England. By Walter Godfrey, F.S.A., F.R.I.B.A. In the footnote to the review of vol. ii (Renaissance) printed in our issue for July 1, this instalment was inadvertently described as vol. i, and the price was quoted as 5s. 6d., whereas it is 6s. 6d. net.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

THE following are some notes from minutes of a recent meeting of the Council of the R.I.B.A. :

The President. The Hon. Secretary spoke of the great services which Sir Banister Fletcher had rendered to the Institute and to the profession during his tenure of the office of President, from which he was shortly to retire, and on the Hon. Secretary's proposition a very hearty vote of thanks was passed in favour of the President. The President, in thanking the Council for their kind resolution, briefly referred to the work of the session and expressed his gratitude to the members of the Council and to the secretary and staff for their loyal support.

Retiring Members of Council. On the proposition of the President a cordial vote of thanks was passed in favour of the retiring members of Council.

The Annual Dinner. A cordial vote of thanks was passed in favour of the Benchers of Lincoln's Inn for their kindness in lending the Hall of Lincoln's Inn for the annual dinner.

South Wales Architecture Medal. The award of the R.I.B.A. South Wales Architecture Medal, 1930, for the new building for Messrs. James Howells & Co., St. Mary Street, Cardiff, designed by Mr. Percy Thomas, F.R.I.B.A., of Messrs. Ivor Jones and Percy Thomas, was formally approved by the Council.

Joint Committee of Architects and Quantity Surveyors. On the recommendation of the Practice Standing Committee the following members were appointed to represent the R.I.B.A. on a Joint committee of architects and quantity surveyors which has been set up to consider and report on questions of mutual interest to the two professions : Messrs. J. Alan Slater, L. Sylvester Sullivan, Sydney Tatchell, and Charles Woodward.

The International Congress for Art Education, Vienna, 1932. On the recommendation of the Board of Architectural Education, Mr. A. H. Moberly, F.R.I.B.A., was appointed to serve as the R.I.B.A. representative on the Organizing Committee of the above Congress, and a donation of £5 5s. was made towards the funds of the Organizing Committee.

The Advisory Council of the Building Industry. Mr. Sydney Tatchell, F.R.I.B.A., and Mr. Louis Blanc, L.R.I.B.A., were appointed to represent the R.I.B.A. on the Advisory Council of the Building Industry and Mr. Louis Blanc on the Executive Committee of the Advisory Council. A contribution of £25 was made to the funds of the Advisory Council for the year 1931.

Grant to the Wren Society. It was agreed to make a grant of £100 to the Wren Society towards the cost of publishing the drawings of Sir Christopher Wren.

The Architectural Association. It was agreed to renew the grant of £100 to the Architectural Association for the year 1931.

The Association for the Preservation of Rural Scotland. It was agreed to make a grant of £10 to the Association for the Preservation of Rural Scotland for the year 1931.

The Court of Governors of the University College of the South-West of England. Mr. John Bennett, F.R.I.B.A., President of the Devon and Cornwall Architectural Society, was appointed to represent the R.I.B.A. on the Court of Governors of the University College of the South-West of England.

The Empire Forestry Association. Mr. H. D. Searles-Wood, F.R.I.B.A., was renominated as the R.I.B.A. representative on the Governing Council of the Empire Forestry Association.

British Standard Specification for Constructional and Electric Signs. Mr. P. J. Waldram, L.R.I.B.A., was appointed to represent the R.I.B.A. on a technical committee which has been set up by the B.E.S.A. to prepare standard specifications for constructional and electric signs.

The Ulster Society of Architects. The revised bylaws of the Ulster Society of Architects were formally approved by the Council.

The Control of Advertisements under Town and Country Planning Schemes. The President reported that on the recommendation of the Art Standing Committee he had signed, on behalf of the R.I.B.A., a memorandum on the control of advertisements under Town and Country Planning Schemes drawn up by the Scapa Society for submission to the Standing Committee of the House of Commons which is at present considering the Town and Country Planning Bill. The action of the President was approved.

Christmas Holiday Lectures for Boys and Girls. The Art Standing Committee reported that Mr. E. R. Jarrett, A.R.I.B.A., had accepted their invitation to give the next series of Christmas holiday lectures to boys and girls.

Suggested standard form of Agreement between architect and client. A draft standard form of agreement for use between architect and client drawn up by Mr. W. E. Watson, F.R.I.B.A., at the request of the Practice Standing Committee, was approved for publication.

Membership. The following members were elected : As Hon. Corresponding Members, 2; as Fellows, 16; as Associates, 11; as Licentiates, 22.

Election, July 6, 1931. Applications for Membership were approved as follows : As Hon. Associate, 1 application; as Fellows, 18 applications; as Associates, 5 applications; as Licentiates, 45 applications.

Reinstatement. The following ex-member was reinstated : As Associate : Bruce Johnston.

Application for Election as Licentiate under Section III (f) of the Supplemental Charter of 1925. One application was approved.

Applications for Transfer to the Retired Members Class under Bylaw 15. The following members were transferred to the Retired Members Class : As Retired Associates : Lt.-Col. Frank Earle (A. 1893); James Paxton (A. 1892); Bertram Norman Southall (A. 1889).

Election of Students. The following probationers were elected as Students of the R.I.B.A. :

Andrews, Edwin Douglas (Intermediate Examination); Bell, James (Glasgow School of Architecture); Bickerton, Beryl Wainwright (Architectural Association); Booth, Leonard Noel (McGill University, Montreal); D'Alwis, Hylton Theodore Shirley (Liverpool School of Architecture); Darch, John Thomas (Welsh School of Architecture); Davies, William John (Welsh School of Architecture); Garnett, Kathleen Erica (Intermediate Examination); Halstead, Haydn Albert Edward (Robert Gordon's Colleges, Aberdeen); Harvey, David (Edinburgh College of Art); Holder, Frederick William (London University); Jones, Albert Edward (Northern Polytechnic); Jadhar, Marooti Krishnaji (Bombay School of Art); Lazarus, Jacob (Liverpool School of Architecture); Livingstone, Duncan (Edinburgh College of Art); Locke, Bertrand (Special Exemption); Meiring, Adriaan Louw (Liverpool School of Architecture); Middlemiss, Clyde Oliver (Southend School of Arts and Crafts); Pratley, Gilbert John (Northern Polytechnic); Roe, Mervyn Frederick Hurford (Birmingham School of Architecture); Ross, Henry Sheldon (McGill University, Montreal); Savill, Alexander Gordon (Architectural Association); Scott, Robert Alexander (Edinburgh College of Art); Sjostrom, Cyril Leonard (Northern Polytechnic); Smith, Richard Vernon (Liverpool School of Architecture); Valentine, Hugh Allen Inglis (McGill University, Montreal).

ARCHITECTURAL SOCIETIES VISIT SUSSEX

Members of the South-Eastern Society of Architects joined with members of the Hampshire and Isle of Wight Society of Architects in a visit to Chichester and neighbourhood on June 27. Among the party, which numbered about 150, were Messrs. Arthur A. G. Fenning, F.R.I.B.A., president of the South-Eastern Society; John L. Denman, F.R.I.B.A. (one of the vice-presidents); Richard Goulburn Lovell, A.R.I.B.A., of Eastbourne (hon general secretary); and J. Arthur Smith, F.R.I.B.A. (president of the Hampshire and Isle of Wight Society).

The party first visited the Cathedral, where they were conducted round by the Dean (the Very Rev. A. S. Duncan-Jones) and Mr. Macdonald Gill,

architect, the Dean explaining the restoration work now in progress. The party afterwards visited the Old Kitchen and the chapel at the Bishop's Palace, the Guildhall in Priory Park, and St. Mary's Hospital, returning to the Dolphin Hotel for lunch.

After lunch the party went in motor coaches and private cars to Boxgrove Priory, over which they were conducted by the Vicar, the Rev. E. A. Popham; then to Goodwood racecourse, Trundle Hill and the prehistoric camp, where an interesting talk was given by Mr. Lovell. From Goodwood the party proceeded to Midhurst, where a visit was paid to the Cowdray ruins, and then back to Chichester in time for tea, which was served at the Dolphin Hotel.

LAW REPORTS

BUILDERS' SALE WITHOUT CONSENT

Cressall v. *Houghton and others. Chancery Division. Before Lord Justice Lawrence*

THIS was an interesting action, and raised a point as to whether a purchaser could enforce specific performance for a sale of land from a vendor who held under lease from a freeholder, to whom he was under covenant not to assign or part with without approval, when such approval had not been given before the contract for sale.

The action was by Mr. Alfred E. Cressall, of Julian Road, Folkestone, against Messrs. C. H. Houghton, P. Denne and R. J. Chidwick, builders trading in partnership at Cheriton Road, Folkestone, for the specific performance of an agreement of September, 1930, for the sale by the defendants of their leasehold interest in a plot of land at Cheriton Road, Folkestone.

Mr. Ramsbotham appeared for the plaintiff, and Mr. A. Clark for the defendants.

Mr. Ramsbotham said the defendants held the land under lease from Lord Radnor, who was the freeholder, and the lease contained a covenant that the defendants would not assign or part with any part of the land without Lord Radnor's consent.

What happened here was this. The plaintiff desired to acquire the plot in question in September last, and he employed Mr. V. Shone, an architect and surveyor of Folkestone, to negotiate for it. Mr. Shone was successful in his task and purchased the defendants' interest for £75. An agreement was signed which stated that defendants sold, subject to the approval of Lord Radnor, their interest in the land, for £75 paid as compensation for loss of building profit and subject to defendants tendering for the erection of any preferred house, prior to tenders being invited. The plaintiff paid a deposit of £5. Later the defendants asked for the payment of a sum of £65 odd for plaintiffs' share of the fencing of the land, party wall and sewers. The plaintiff declined to pay these additional charges, and defendants then said unless plaintiff paid that sum he could not have the land.

Under these circumstances the action was brought.

His lordship pointed out that, in his opinion, the parties had entirely mistaken their rights. He would have thought that it was quite plain that plaintiff could not enforce an agreement which had never been approved by the third party, Lord Radnor. The agreement was quite contrary to the covenant in the defendants' lease, which said that they should not assign or part with the land until they had the approval of Lord Radnor. The action was entirely misconceived. The Court did not decree specific performance where the consent of a third party had to be obtained, and it had not been done. He dismissed the action with the costs. The counter-claim, which had not been opened, he dismissed without costs.

ALLEGED ENCROACHMENT

Barr v. *Hearsey. Chancery Division. Before Mr. Justice Farwell*

In this action the plaintiff was Mrs. Ethel Gertrude Barr, of Laleham-on-Thames, the wife of Mr. V. S. Barr, an architect, against the defendant, Mr. Walter R. Hearsey, garage proprietor, of Laleham-on-Thames, for an injunction restraining him from erecting any building or other structure on land adjoining plaintiff's land in such a manner as to encroach upon or overhang her property.

Plaintiff's case was that the defendant had erected a garage adjoining her garden and had placed a gutter upon the wall 8 ft. from the ground and extending 61 ft. in length, which projected from 2½ to 1½ inches beyond the wall so as to become an alleged nuisance.

Defendant set up a counter-claim against the plaintiff for an alleged trespass by the plaintiff, saying that the plaintiff had erected an aviary and trellis work on his wall.

With regard to the plaintiff's claim, defendant replied that he had erected his wall on old footings, the base of which abutted some inches beyond the present wall and that his gutter did not extend beyond those foundations.

Expert evidence was given by Mr. W. R. Lowe, architect, and Mr. W. Woodbridge Biggs, F.S.I.

His lordship, in giving judgment, said the whole thing seemed to him to be a storm in a tea-cup, and he was not inclined to help either party. The counter-claim obviously failed. After considering all the facts he granted plaintiff 40s. nominal damages and there would be no costs to either side, each party paying their own.

LIGHT AND AIR DISPUTE

News of the World, Ltd. v. *Allen Fairhead and Sons, Ltd. Chancery Division. Before Mr. Justice Farwell*

This was an action by the proprietors of the *News of the World* against Messrs. Allen Fairhead and Sons, Ltd., contractors, of Enfield, for an injunction to restrain the defendants rebuilding 65 Fleet Street and 41 Whitefriars Street to such a height as to be a nuisance by obstructing the ancient light of plaintiffs' premises on the opposite corner, viz., 67 Fleet Street and Nos. 2 and 3 Whitefriars Street.

Mr. Swords, K.C., for the plaintiffs, said that the plaintiffs' premises were rebuilt in 1927 at the corner of Fleet Street and extended down Whitefriars Street. The defendants' premises were immediately opposite. Whitefriars Street was roughly about 23 ft. wide. The defendants' old building was 43 ft. high at the Fleet Street end and slightly lower in Whitefriars Street. But the new building they proposed to erect was 69 ft. 6 ins. throughout. Mr. Scott, the plaintiffs' architect, protested that this would seriously interfere with the plaintiffs' ancient lights, and after an interview and some correspondence the defendants modified the height by about 2 ft. This being unsatisfactory to the plaintiffs, the writ in the action was issued.

One of the defences raised was that by reason of the demolition of the plaintiffs' old building they had lost or abandoned any easement of light over their property.

The plaintiffs, counsel said, would call evidence to show that there had been no alteration in the position of the windows in the old building and the new building.

The expert witnesses called on behalf of the plaintiffs were Mr. Augustus Alban Hamilton Scott, architect, Old Square, Mr. Edgar Bunce, A.R.I.B.A., and Mr. John Swarbrick, F.R.I.B.A.

Sir Herbert Cunliffe, K.C., for the defendants, submitted that the plaintiffs had wholly failed to establish the identity of the old lights and therefore it could not be said that the defendants had created a nuisance.

Mr. Percy S. Waldram, consulting engineer and surveyor and daylight illumination expert, gave evidence for the defendants.

His lordship dismissed the action with costs. He said he was not satisfied that there had been any abandonment of rights which plaintiffs enjoyed before the old building was pulled down. But in order to succeed plaintiffs must prove the exact position of the windows and apertures which previously existed. This they had not done. In his opinion the defendants' building was not a nuisance. Plaintiffs had not established any rights to lights at all beyond the ground floor. Although they had some rights with regard to these they had failed to satisfy the court that the defendants' building was a nuisance and therefore the action would be dismissed with costs.

TRADE NOTES

For accurate colour matching by artificial light, it is necessary to instal a unit which will give complete correction, allowing no direct rays whatever to reach the work. For this purpose the Sheringham Daylight Unit has been specially devised. Its principle is simple. Under the electric lamp is a cup-shaped specular reflector which screens the filament in all downward or horizontal directions, and throws back these components on to the main pigment-treated reflector. As with the Sheringham corrective reflector, these pigments are arranged and proportioned in accordance with a mathematical formula, and the resultant light is claimed to be so corrected as to give a spectroscopic analysis identical with that obtained from true north daylight. It will, of course, be appreciated that the light of day is not constant in its composition, and therefore the Sheringham unit is designed to give true average daylight. The accuracy with which colours can be matched by Sheringham Daylight is shown by a plate published in colour in a booklet by the Sheringham Daylight Company (1930), Ltd. This shows a delicately-shaded Japanese vase photographed in the four qualities of light indicated. The ordinary daylight photograph was taken at 3 p.m. in February in fine sunny conditions, using a north-aspect light. In the three electric light views great care was taken to render the results strictly comparable. These views repay close study and comparison, as they indicate more graphically than would be possible by reference to spectroscopic analyses or formulæ the divergencies or similarities between the various qualities of light.

*

From now onwards it will be possible for the community as a whole to enjoy the benefits of domestic refrigeration, for Electrolux, Ltd., have brought out a small refrigerator which will be sold at a price which almost everyone can afford. This new refrigerator will be delivered and installed in any home in Great Britain for the sum of 23s. down. It will be known as the " Freezolux " gas-operated refrigerator. It is different from all other refrigerators in that it has no mechanism whatsoever, depending for its operation upon a small gas flame. It is an extremely simple piece of equipment and any woman can understand it, for it is quite automatic and absolutely reliable. Although of small size, it is sufficient for the needs of the average household, and, last but not least, it is of British manufacture throughout, for it is made in the Electrolux works at Luton, Beds.

The cooling unit is designed to operate on gas. the consumption being 2½ cubic ft. per hour, thermostatically controlled. A supply of cooling water amounting to three gallons per hour will also be necessary. The cooling water will be controlled simultaneously with the supply of gas, resulting in average consumptions over 24 hours of approximately 35 to 40 cubic ft. of gas and 40 to 45 gallons of cooling water per day of 24 hours under average conditions of use throughout the year.

The time cannot be far distant when domestic refrigerators will be as widely used as gas-cookers, for everyone who uses gas is now able to obtain a " Freezolux " on terms they can well afford. The advantages of a domestic refrigerator are fairly well known. In addition to the preservation of foods of every kind—particularly meat, fish and milk—a refrigerator prevents a good deal of waste; particularly during hot weather when food goes off quickly and has to be thrown away.

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In a leaflet issued by Messrs. Henry C. Stevens, Ltd., attention is drawn to the firm's stains for woods. These are supplied in nine different kinds, namely, mahogany, walnut, oak (two shades), rosewood, wainscoat, cedar and ebony. They consist, it is claimed, of durable colour matters so combined as to produce a close and extremely natural resemblance to the colours (with their soft rich undertones) of the best descriptions of the real woods. They can be used for floorings, staircases and halls, and as a border decoration round Turkey carpets; or for churches, chapels, public halls, railway-stations, warehouses, factories, etc., shop fittings, etc. The method of using the stains consists of three distinct operations: First, staining; secondly, sizing; lastly, varnishing, beeswaxing or French polishing. The wood, it is stated, should be very evenly planed, and knots and nail holes covered by mixing into paste a little of the stain with plaster of Paris, and sappy portions of the wood damped with water or sized. Stain may then be laid on plentifully with a brush, along the grain of the wood. When the wood is thoroughly dry, it must be twice sized (using each time a strong solution of size), and subsequently varnished. If an interval of twenty-four hours, or longer, be left after staining before sizing, the colour is softer and richer. As the beauty of the result depends mainly on the grain of the wood, well-seasoned wood of beautiful figure and variety in the grain should be selected for choice work. Work intended for French polishing should be sized once before applying the polish. Gas black should not be used in finishing off the ebony stain; this stain should be sized as soon as the stain is dry. Exterior work should be sized once and varnished twice, and for rough work boiled oil may be used instead of varnish. The different stains can be mixed together to obtain a modification of their respective colours, and they may be diluted with water for light shades, or applied twice for a deeper shade. The stains are obtainable from Messrs. Henry C. Stevens, Ltd., 57 Aldersgate Street, E.C.1.

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The business carried on by Stein Bros., Ltd., at Ocean House, 24–25 Great Tower Street, London, E.C.3, has been merged into that of Honeywill Bros., Ltd., of 79 Mark Lane, E.C.3. The combined companies will be carried on under the name of Honeywill and Stein, Ltd., at London House, 3 New London Street, London, E.C.3. Telephone Nos.: Royal 3040–1–2 and Royal 8724–5. Mr. R. H. Stein has been appointed managing director.

ANNOUNCEMENTS

ARCHITECTS' CONFERENCE, DUBLIN, 1931

GOLD CUFF LINKS were found in the Italian Garden, Garnish Island, during the week-end tour to the South of Ireland.

A GOLD SIGNET RING was found in the director's office after the visit to Messrs. Guinness's Brewery on Saturday, June 20.

Mr. Harry Allberry will be pleased to arrange for the return of these articles on inquiries being addressed to him at 8 Merrion Square North, Dublin.

The Automobile Association has issued a special map of Oxford Street, which clearly indicates the restrictions and prohibitions which obtain within the scheduled area of control. All essential information regarding prohibited turnings to the right, one-way streets and speed restrictions are clearly shown, in addition to a summary of the regulations, and motorists who have studied the map will have no difficulty in understanding and complying with the various control systems. The map may be obtained gratis on application to the Secretary, the Automobile Association, Fanum House, New Coventry Street, W.1, or to any A.A. branch office.

Messrs. Burnett and Sons, chartered architects and surveyors, have removed their offices from 2 High Street, Southampton (necessitated by the Bargate improvement scheme), to 20 Portland Terrace, Southampton. Telephone No.: Southampton 3087.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Park Lane Hotel Extension, No. 107 Piccadilly, W.1 (pages 39–41). General contractors, Higgs and Hill, Ltd. Sub-contractors : Aston Construction Co., Ltd., steelwork; Dent and Hellyer, Ltd., drainage and internal plumbing; Fenning & Co., Ltd., black Belgian granite; Kleine Co., Ltd., fireproof flooring; C. A. Rigby, waterproofing work; J. Whitehead and Sons, Ltd., marble work to staircase; Middleton Fireclay Co., Ltd., faience work; Richard Crittall & Co., Ltd., heating, hot and cold water services, and ventilation; Crittall Manufacturing Co., Ltd., steel windows; Tredegars, Ltd., electric lighting; R. W. Brooke & Co., Ltd., maple floor to ballroom; Express Lift Co., Ltd., passenger lift; George Johnson, Ltd., hand lift; Ames and Finnis, roof tiling; Emerson and Norris, cast stone dressings; Chas. Smith & Co., Ltd., locks and furniture; Eric Munday, shop and entrance fronts, canopy, etc.; Kenan, Ltd., decorations on the ground floor and basement; F. Tibbenham, Ltd., decorations to the residential suites on upper floors facing Piccadilly; Dent and Hellyer, Ltd., and Shanks & Co., Ltd., sanitary fittings; Carter & Co., Ltd., tiling; Art Pavements and Decorations, Ltd., precast staircase; D. Sebel & Co., Ltd., iron staircase; W. Hitchins & Co., Ltd., laminated doors.

Lloyds Bank, Ltd., 275 Kentish Town Road, London (page 42). General contractors, Lole & Co., Ltd. Sub-contractors : Horley Facings, bricks; Caxton Floors, Ltd., fireproof flooring; Engert and Rolfe, Ltd., asphalt to flat roof; Zeta Woodblock Flooring Co. (1910), Ltd., woodblock flooring in banking hall (staff side); Art Pavements and Decorations, Ltd., patent flooring in banking hall; H. and C. Davis & Co., Ltd., central heating; Watson, Marsh & Co. (Brondesbury), Ltd., electric wiring; L. G. Hawkins & Co., Ltd., electric light fixtures; Holborn Sanitary Co., Ltd., sanitary fittings; W. and R. Leggott, Ltd., door furniture; Brunswick Engineering Co., metal casements; Hobbs, Hart & Co., Ltd., strongroom door; H. B. Sale, Ltd., metal counter grilles; W. T. Nicholls, Ltd., counter fittings, etc.; G. Johnson, Ltd., book lift.

New Offices for Southwark Catholic Rescue Society, Westminster Bridge Road and Barbel Street, S.E. (page 47). General contractor, Albert Monk. Sub-contractors : Ragusa Asphalte Paving Co., asphalt; Shaw's Glazed Brick Co., terra-cotta; A. D. Dawnay and Sons, Ltd., structural steel; Kleine Co., Ltd., fireproof flooring; Hollis Bros., Ltd., wood-block flooring; Mosaic and Terrazzo Co., terrazzo; Holden & Co., linoleum; Leyland and Birmingham Rubber Co., Ltd., rubber flooring and stairtreads; Air-Vent Heater Co., Ltd., central heating and boilers; Gas Light and Coke Co., Ltd., gas fixtures and fitting; A. J. Dean & Co., Ltd., electric wiring, fixtures and heating; Holborn Sanitary Co., Ltd., sanitary fittings; The Jones Lock Co., door furniture; Crittall Manufacturing Co., Ltd., casements; Gladwell and Kell, Ltd., metalwork and folding gates.

There are still six days left for intending competitors to submit sketches for the July Holiday Sketches Competition. Full particulars of this competition, together with the necessary motto labels, appeared in last week's (July 1) issue of THE ARCHITECTS' JOURNAL.—ED., A.J.

COMPETITIONS OPEN

July 17.—Buildings for a street improvement scheme. Assessor : George Drysdale, F.R.I.B.A. Premiums : 50 guineas and 20 guineas. Conditions, etc., obtainable from the Borough Surveyor, Council House, Walsall, until July 17. (Deposit £1 1s.)

July 31.—Sending-in day. Proposed Nurses' Home at the Royal Asylum, Montrose. Limited to architects practising in the counties of Aberdeen, Angus, Fife, Kincardine and Perth. Assessor : John Watson, F.R.I.B.A. Premiums : £75, £50 and £25. Conditions, etc., obtainable from C. K. Alexander, Clerk and Treasurer, Royal Asylum, Montrose.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor : Andrew N. Prentice, F.R.I.B.A. Premiums : £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor : Francis Jones, F.R.I.B.A. Premiums : £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions : August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1 Assessors : Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium : £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

THURSDAY, JULY 9

MARGATE SCHOOL OF ART. Eleventh of twelve lectures on Beauty in Design : "Hygiene and Acoustics." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

BRITISH MUSEUM, Bloomsbury, W.C.1. Lecture on "Origins of Architecture. 1. Greek." By Cecil Hallett, B.A., F.S.A. **12 noon.**

SCIENCE MUSEUM, Exhibition Road, S.W.7. Lantern-Lecture on "Electricity." By S. H. Groom. **3 p.m.**

FRIDAY, JULY 10

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Opening of the Exhibition of Students' Work.

NATIONAL HOUSING AND TOWN PLANNING COUNCIL. Conference to be held at the County Hall, Westminster Bridge Road, S.E.1.

ROYAL SANITARY INSTITUTE. 1931 Congress at Glasgow. Lecture on "A Continuous Health Policy." By Major Walter Elliott, M.P., LL.D., D.SC., M.B. In the Royal Technical College, Glasgow. **8 p.m.**

SATURDAY, JULY 11

Sunrise, 4.55 a.m. Sunset. 9.15 p.m.

MONDAY, JULY 13

INSTITUTION OF MECHANICAL ENGINEERS. Summer Meeting to be held at Cambridge.

TUESDAY, JULY 14

SCIENCE MUSEUM, Exhibition Road, S.W.7. Lecture on "Light and Colour." By S. H. Groom, **12 noon.**

VICTORIA AND ALBERT MUSEUM, S.W.7 : Lecture on "Architecture" (No. 1). **12 noon.** Lecture on "Architecture" (No. 2). **3 p.m.**

ARCHITECTS' JOURNAL HOLIDAY SKETCHES COMPETITION. Closing date. Entries for July Competition to reach the Editor at 9 Queen Anne's Gate, S.W.1, by first post.

THURSDAY, JULY 16

MARGATE SCHOOL OF ART. Last of twelve lectures on Beauty in Design : "Illumination and Colour." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SCIENCE MUSEUM, Exhibition Road, S.W.7. Lecture on "Lighting and Illumination." By G. Tilghman Richards. **12 noon.**

INSTITUTE OF FUEL, 53 Victoria Street, S.W.1. Meeting in the Marylebone Room, Great Central Hotel, London. **10.30 a.m.**

NATIONAL SMOKE ABATEMENT SOCIETY, 71 Eccleston Square, S.W.1. Council Meeting followed by Open Meeting. Address : "Smoke Abatement from the Manufacturers' Point of View." By W. Prescott, Federation of British Industries. **3.15 p.m.**

FRIDAY, JULY 17

DESIGN AND INDUSTRIES ASSOCIATION. Short Cruise to Norway, returning July 24.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual Exhibition to be held at Winchester.

SATURDAY, JULY 18

Sunrise, 5.2 a.m. Sunset, 9.9 p.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Visit to the neighbourhood of Guildford by the Brighton and Guildford Chapters.

MONDAY, JULY 20

VICTORIA AND ALBERT MUSEUM, Cromwell Road, S.W.7. Lecture on "Ironwork." **12 noon.**

WEDNESDAY, JULY 22

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to St. Mary-le-Bow, Cheapside, E.C.2. Tickets obtainable from the Secretary. **3 p.m.**

THURSDAY, JULY 23

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to new Offices of *Punch*, Bouverie Street, E.C.4. Tickets obtainable from the Secretary. **3 p.m.**

BRITISH MUSEUM, Bloomsbury, W.C.1. Lecture on "Origins of Architecture."—II. (Roman, etc.) **12 noon.**

SATURDAY, JULY 25

Sunrise, 5.11 a.m. Sunset, 9.0 p.m.

TUESDAY, JULY 28

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to Welwyn Garden City. Tickets obtainable from the Secretary. **3 p.m.**

THURSDAY, JULY 30

NATIONAL PORTRAIT GALLERY, St. Martin's Place, W.C.2. Lecture on "Inigo Jones." By John Steegmann, M.A. **3 p.m.**

SATURDAY, AUGUST 1

Sunrise, 5.22 a.m. Sunset, 8.50 p.m.

VICTORIA AND ALBERT MUSEUM, Cromwell Road, S.W.7. Lecture on "Ecclesiastical Metalwork." **12 noon.**

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Having inspected houses at Cheshunt, the BARKING U.D.C. has revised its scheme for the erection of 152 houses on the Upney Farm estate, the cost now being estimated at £52,266.

Plans passed by the BARKING U.D.C. : Nineteen houses on the Becontree estate for the L.C.C.; petrol depot, West Bank, for Trinidad Leaseholds, Ltd.; houses, Ripple Road, for Messrs. Lord and Mellodew, Ltd.

The BARKING U.D.C. is to deal with various clearances, and has instructed the architect to prepare plans for the erection of three- and four-story tenements on the cleared sites.

The BARNES U.D.C. has acquired a site of five acres at Mortlake for a housing scheme.

The BRENTFORD Education Committee has approved revised plans for erection of a school centre in Boston Road at a cost of £4,000.

The BRENTFORD AND CHISWICK U.D.C. has instructed the surveyor to prepare a scheme for the provision of wash-houses at the Brentford baths, including the provision of filtration plant.

The BRENTFORD AND CHISWICK U.D.C. has submitted preliminary plans to the Ministry of Health for erection of houses in Church Walk.

The BRENTFORD AND CHISWICK U.D.C. is to provide a new burial ground at a cost of £5,280 for the layout; £4,500 for the erection of a chapel; and £1,300 for conveniences.

The CHISWICK AND EALING Hospitals Committee has obtained land in Clayponds Lane, for the extension of the hospital.

The CITY OF LONDON Corporation is to widen Queen Victoria Street, at a cost of £250,000.

The CITY OF LONDON Corporation is to arrange for a widening in connection with proposals for the reconstruction of Old Jewry Chambers, Old Jewry.

The HORNSEY Corporation is to erect eighteen flats at Churchyard Bottom, at a cost of £6,570.

The LEWISHAM B.C. is to make inquiries for sites suitable for the erection of blocks of flats.

The L.C.C. has acquired the Phoenix Wharf site, Isle of Dogs, for the erection of dwellings for rehousing persons to be displaced from clearance areas in East London.

The MIDDLESEX C.C. is to modernize one of the wards of the West Middlesex Hospital, at a cost of £1,600.

The MIDDLESEX C.C. has decided to proceed with the second stage of the scheme for the reconstruction of the Harefield sanatorium and obtain tenders for the work, which is estimated to cost £74,500.

The MIDDLESEX C.C. is to reconstruct railway bridges in Gunnersbury Lane and Gunnersbury Avenue, at a cost of £16,000.

The MIDDLESEX Education Committee has purchased a site in Royal Lane, South Hillingdon, for the erection of an elementary school.

The POPLAR B.C. has decided to proceed with clearance schemes in the Providence Cottages and the Benworth Street areas.

Plans passed by the POPLAR B.C. : Bakehouse, St. Leonards Road, for Mr. W. T. Lawrence; additions, Bow Road, for Messrs. Andrews and Peascod; additions, Coborn Girls School, Bow Road, for Messrs. G. Elkington and Son.

The ST. PANCRAS B.C. has passed plans for the reconstruction of 303–5 Kentish Town Road.

The ST. PANCRAS B.C. has asked Messrs. Ashley and Newman to prepare plans for the erection of another story at Una House, comprising sixteen flats. The estimated cost is £7,000.

The ST. PANCRAS B.C. is to erect another block of eighteen tenements on the Somers Town site, at a cost of £10,000.

The ST. PANCRAS B.C. has approved a scheme for the erection of dwellings comprising fifty-four tenements on a site at Kentish Town, at an estimated cost of £35,000.

The ST. PANCRAS B.C. is considering a scheme for the reconstruction of the town hall on the present site and adjoining land in King's Road.

The STEPNEY B.C. is to erect tenements in Ropemakers Fields, at a cost of £21,000.

The L.C.C. has let land at the rear of 51–55 STRAND, to Messrs. N. and A. Moss, for the purpose of a building scheme.

The WANDSWORTH B.C. is considering a revised scheme, prepared by Mr. Edward Hunt, architect, for municipal buildings for the Wandsworth B.C.

The WESTMINSTER City Council is to erect shops on the Grosvenor housing estate, at a cost of £7,590.

Plans passed at WESTMINSTER : Frontage lines, Hotel Curzon, 56–60 Curzon Street, and 23–26 Bolton Street, for Messrs. Henry Tanner; frontage lines and balconies, Queen's Hotel site, Leicester Square, and Leicester Place frontages, for Mr. H. Kempton Dyson; building with projecting balconies, Infants' Hospital, Vincent Square, for Messrs. Peach and Hall.

The WILLESDEN U.D.C. is to confer with neighbouring authorities regarding the provision of joint isolation hospital accommodation.

The L.C.C. is to prepare plans for the improvement of the residential accommodation at Avery Hill training college, WOOLWICH.

SOUTHERN COUNTIES

Plans passed by the BEXHILL Corporation : Two houses, Cooden Drive, for Messrs. Tubbs and Messer; seven cottages, Ninfield Avenue, and house and bungalow, Plemont Gardens, for Mr. E. Bunce; alterations, British Legion Club, Meads Avenue; four houses, Westcourt Drive, for Mr. J. E. Maynard; house, Cooden Drive, and bungalow, Actons Farm, for Mr. J. Hunt; two houses, Sedgewick Road, for Mr. J. H. Lye; church hall, Wickham Avenue, for Mr. S. F. Johnson; church, Cooden Drive, for Mr. W. H. R. Blacking; two bungalows, Chestnut Walk, for Mr. A. J. Coomber.

The BRIGHTON Corporation has approved plans prepared by Messrs. Clayton and Black for erection of an admission hospital for mental patients on the Beechmount estate, at an estimated cost of £23,215.

Plans passed at COULSDON : Three houses, Byron Avenue, for Mr. C. L. G. Morgan; bungalow, Brighton Road, for Mr. W. Cottage; bungalow, Old Coulsdon estate, for Mr. R. Yates; bungalow, Keston Avenue, for Mr. S. J. Blizzard; garage, offices, shops and dwellings, Brighton Road, for Messrs. T. Haywood and Sons; two houses, Bradmore Way, for Mr. D. A. Davey; two houses, Winifred Road, for Mr. H. J. Salter; ten houses, Ridgemount Avenue, for Mr. A. G. Cresswell; thirty houses, Glenn Avenue, for Mr. F. W. Thomas.

The COULSDON U.D.C. has asked the surveyor to prepare plans for the reconstruction of Woodcote Grove bridge

Messrs. Guscote, Fowler and Cox are to develop the Hooley Farm estate, COULSDON.

The COULSDON U.D.C. is to obtain tenders for the erection of houses and flats on the Woodlands estate.

The COULSDON U.D.C. has asked the surveyor to report as to the provision of a swimming bath at Selsdon.

The COULSDON U.D.C. has obtained a site in Limpsfield Road, Sanderstead, for erection of a fire and ambulance station.

Plans passed by GRAVESEND Corporation : Three houses, Central Avenue, for Messrs. S. and G. Bridger; ten houses, The Fairway, for Mr. H. L. Smith; warehouse, for Messrs. Stooke and Sparks (Gravesend), Ltd.; brewhouse yard, for Mr. G. E. Clay.

The HORSHAM U.D.C. is to undertake a scheme for sewerage and sewage disposal, at a cost of £94,000.

Mr. W. J. Burstow, architect, is to develop the Sherwood Oaks estate, KENLEY.

Plans passed at KENLEY : Thirteen houses, Valley Road, for Messrs. O'Sullivan, Ltd.; house, Oaks Road, for Messrs. E. T. Brown and Son.

Plans passed at PURLEY : House, Cliff End, for Mr. Charles Hudson; two houses, Hartley Down, for Mr. G. T. Fox; house, Manor Wood Road, for Messrs. R. D. Taylor, Ltd.; four houses, Purley Downs Road, for Messrs. Thomas and Son.

Plans passed at SANDERSTEAD : Two houses, Beechwood Road, for Mr. J. R. Webster; three houses, Sanderstead Court Avenue, for Messrs. Lincoln Bros.; nine houses, Purley Downs Road, for Mr. J. P. Warren; four houses, Purley Downs Road, for Mr. H. P. Hawkes; four houses, The Church Way, for Mr. F. Flood.

SOUTH-WESTERN COUNTIES

Plans passed at POOLE : Four houses, Arley Road, for Mr. J. Jagger; house and garage, Ponsonby Road, for Mr. W. A. Young; three pairs of semi-detached houses, Langdon Road, and house, Richmond Road, for Messrs. Rosser and Sturman; two houses, Houlton Road, for Mr. F. Jones; house and garage, Canford Cliff Road, for Mr. E. F. Knight; house and garage, Branksome Hill Road, for Mr. T. E. Graines; two houses, Wimborne Road, for Mr. W. W. Ash; three houses, Shottsford Road, for Mr. W. J. Dacombe; two houses, Ringwood Road, for Mr. H. J. Rogers; two houses, Woodlands Avenue, for Mr. H. V. J. Whiffen; two houses, Highland Road, for Mr. H. Penny.

The PORTLAND U.D.C. is to erect twenty houses on the Victoria Road site from plans prepared by Mr. H. Plewes.

MIDLAND COUNTIES

The COVENTRY Corporation is to erect 470 houses on the Hen Lane estate, at a cost of £143,748; and another six houses on the Hill Farm estate, at a cost of £1,884.

The GLOSSOP Education Committee has asked the borough engineer to prepare final plans for extensions at West End school.

The NOTTINGHAM Corporation is to erect 936 houses on the Bell's Lane estate.

Plans passed by the SMETHWICK Corporation : Fourteen garages, Bearwood Road, for the Ideal Benefit Society; house, Holly Lane, for Messrs. Strong Bros.; eighteen houses, Kimberley Road, for Mr. H. Grindley.

Messrs. Batemans, architects, of Birmingham, have prepared plans for the erection of ten houses in Hampton Road, Knowle, for the SOLIHULL R.D.C.

NORTHERN COUNTIES

The ACCRINGTON Education Committee is to enlarge the elementary school at Spring Hill.

The ACCRINGTON Corporation is to erect a police station, courts, fire station and firemen's dwellings in Manchester Road from plans prepared by Mr. Percy Thomas.

The BOLTON Corporation has obtained sanction to borrow £20,950 for the erection of further houses on the Higher Swan Lane estate.

The BOLTON Corporation has acquired a housing site of thirty acres of land in Chorley Old Road.

The Committee of the Irish Labour Club has prepared a scheme for the erection of new club premises in King Street, BOLTON.

Plans passed by the BOLTON Corporation : Two houses, Todir Avenue, for Messrs. Ashworth Bros.; pavilion, Lock Lane, for Bolton Rugby Union Football Club; four houses, Valletts Lane, for Mr. William Gornall; 152 houses, Swan Lane estate, for the Corporation; alterations, "Boar's Head" inn, Churchgate, for Messrs. Magee, Marshall & Co., Ltd.; amended plans of church, Morris Green, for St. Bede's Parochial Church Council.

The BURY Corporation is to erect 224 houses on the extended Woodhill housing estate.

The West Riding Education Committee is to erect a senior school at HOYLAND NETHER.

The OLDHAM Corporation is to erect 198 houses on the Derker housing estate.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_1	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester ..	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kiddermin-ster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tupstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . ,,	1 8
,, (Fixer) . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4"	6"
	s. d.	s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 2" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R.	4" F.R.
	s. d.	s. d.
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	19 0
,, drawn pipes . . . ,,	19 6
,, soil pipe . . . ,,	22 6
,, scrap . . . ,,	9 0
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" F.R.	4" F.R.	6" F.R.
	s. d.	s. d.	s. d.
Plain cast . . each	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 6
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . bundle	2 4
,, rent . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 ,,	1 0 to	1 3
,, ,, 2 ,,	1 2 ,,	1 7
,, ,, 3 ,,	1 7 ,,	2 5
,, ,, 4 ,,	2 1 ,,	2 11
,, ,, 6 ,,	2 3 ,,	3 2
,, ,, 8 ,,	2 6 ,,	3 6
,, ,, 12 ,,	2 9 ,,	3 8
,, ,, 20 ,,	3 0 ,,	3 11
,, ,, 45 ,,	3 3 ,,	4 1
,, ,, 65 ,,	3 7 ,,	4 6
,, ,, 90 ,,	3 10 ,,	4 9
,, ,, 100 ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 ,,		1 0
,, ,, ,, 2 ,,		1 3
,, ,, ,, over 2 ,,		1 9
,, ,, plate, n/e 1 ,,		1 6
,, ,, ,, 2 ,,		3 0
,, ,, ,, 5 ,,		4 0
,, ,, ,, 7 ,,		5 0
,, ,, ,, 15 ,,		6 0
,, ,, ,,over 15 ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add	3	0
If in underpinning	"	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
" " "	Y.S.		9

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do., all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
3" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	15	6
Do. in flashings	"	1	18	0
Do. in covering to turrets, etc.	"	2	5	0
Do. in soakers	"	1	11	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s.	d.	¾" s.	d.	1" s.	d.	1½" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	6
Do. to stop ends	"	7		9		1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3	
Extra, only stop ends	Each	1	0	
Do. angles	"	1	6	
Do. outlets	"	3	0	
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6	
Extra, only for shoes	Each	2	6	
Do. for plain heads	"	5	6	

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

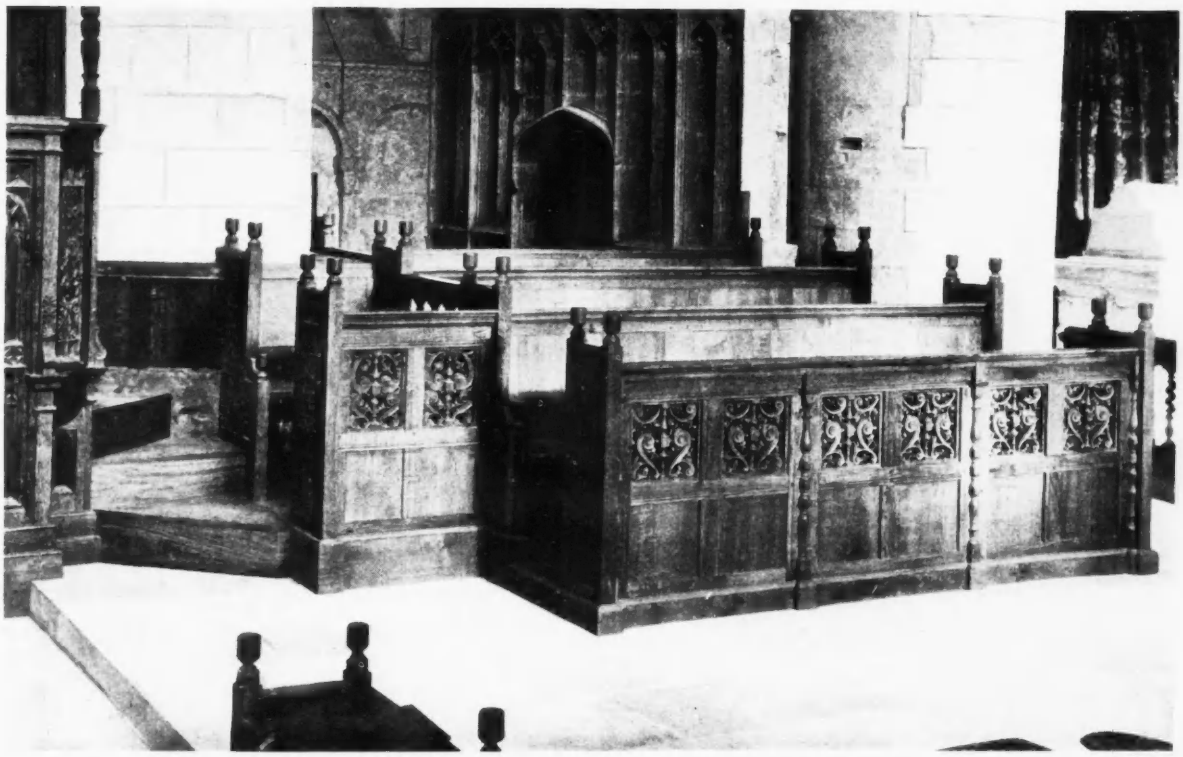
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper	from "	3	0

MALMESBURY ABBEY RESTORATIONS

SIR HAROLD BRAKSPEAR'S DRAWINGS OF THE PULPIT, CLERGY SEATS, SEDILIA, ETC.



THE CLERGY SEATS, WITH PART OF THE PULPIT, ON THE NORTH SIDE OF THE CHOIR

THE pulpit and clergy stalls, of which photographs are given above and on the last page, while the architect's drawings of these and some other details are reproduced overleaf, show new work undertaken in the course of the restoration of Malmesbury Abbey.

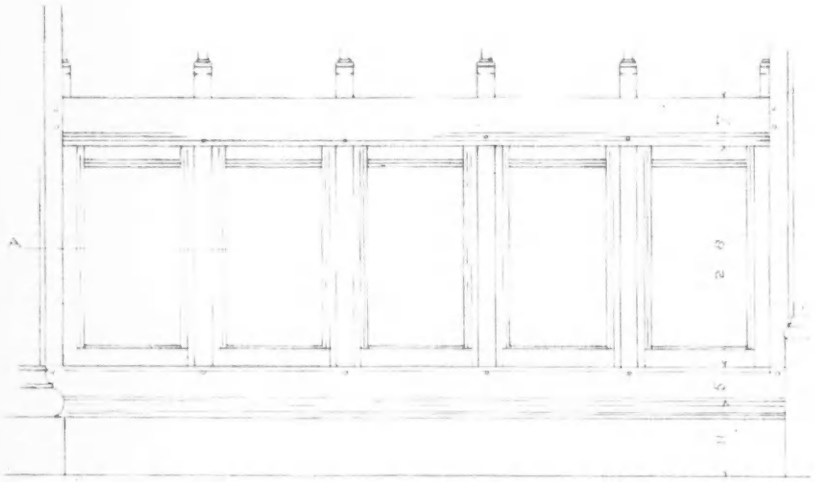
This generation is perhaps more cautious of unqualified applause of antiquity than its predecessors, yet it is more careful than they to preserve the distinctive qualities of ancient work, rather than resorting to imitation. This modern care of antique relics is seen throughout the renovations recently completed under the direction of Sir Harold Brakspear.

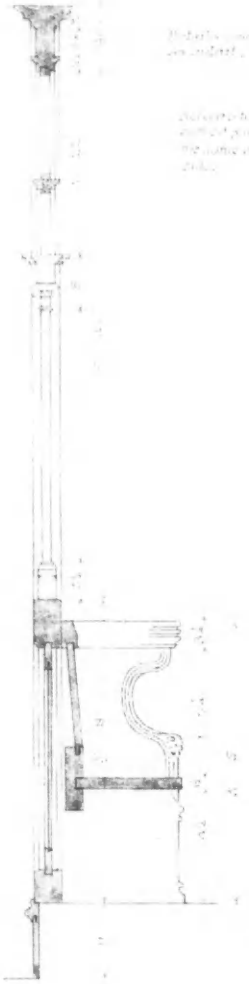
The great west window, blocked by a nineteenth-century choir gallery, was opened up. Appropriate silk hangings on the sanctuary walls replaced an indifferent painting. To the great Norman piers was restored a larger measure of their ancient dignity, by the lowering of the floor to the extent of over a foot, so that their height is no longer severely curtailed, and their proportions are more satisfactorily revealed.

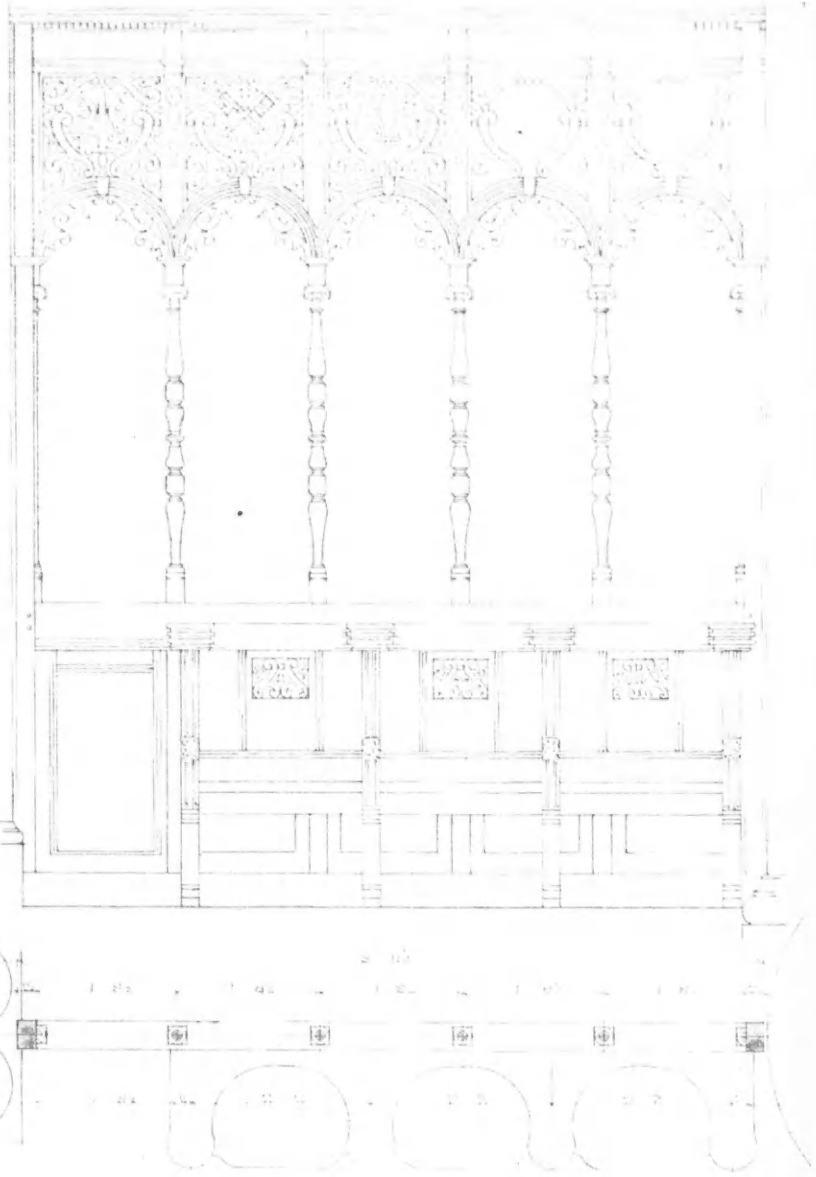
In common with so many of its contemporaries, the roof was suffering from the activities of the beetle. Not only has this condition of the woodwork in inconspicuous structural positions been remedied, but the new pulpit, with its richly carved panels, balusters and canopy, the clergy seats, the sedilia, all in keeping, that have been added to the refurnished east end, demonstrate that the present age can contribute beauty of craftsmanship and enhance the grandeur of the monuments of past piety.

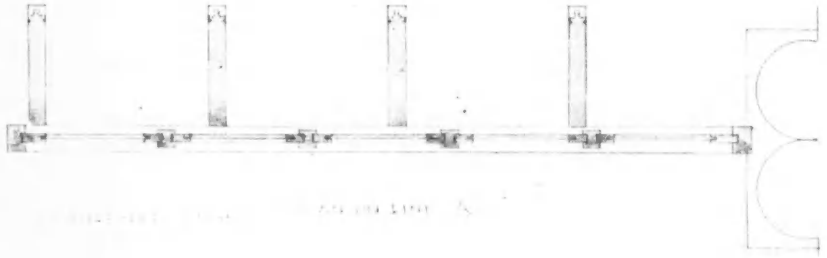
MALMESBURY ABBEY, WILTSHIRE

Details of Pulpit, etc., and Sedilia and Screen, E. Bay, S. Side



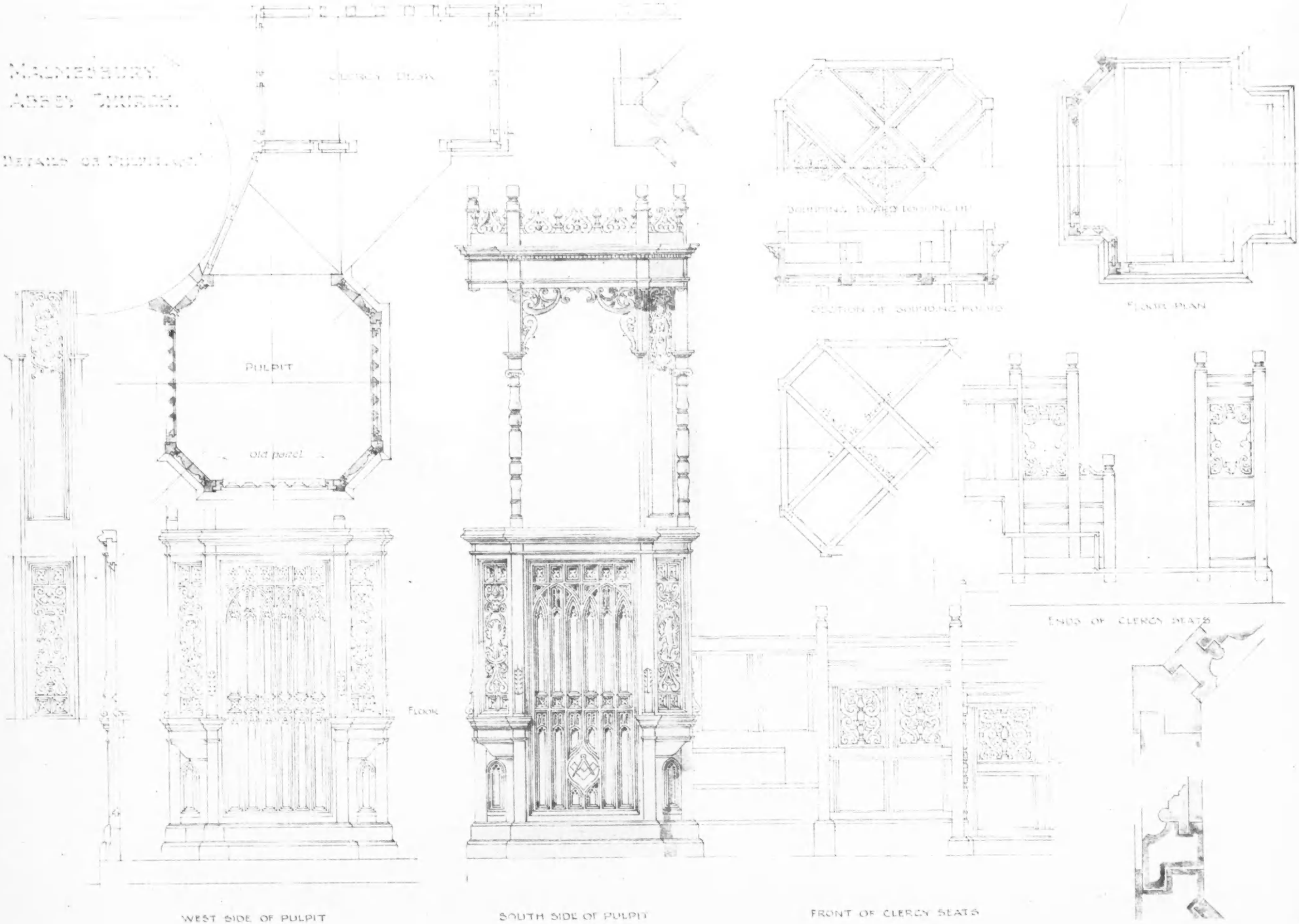


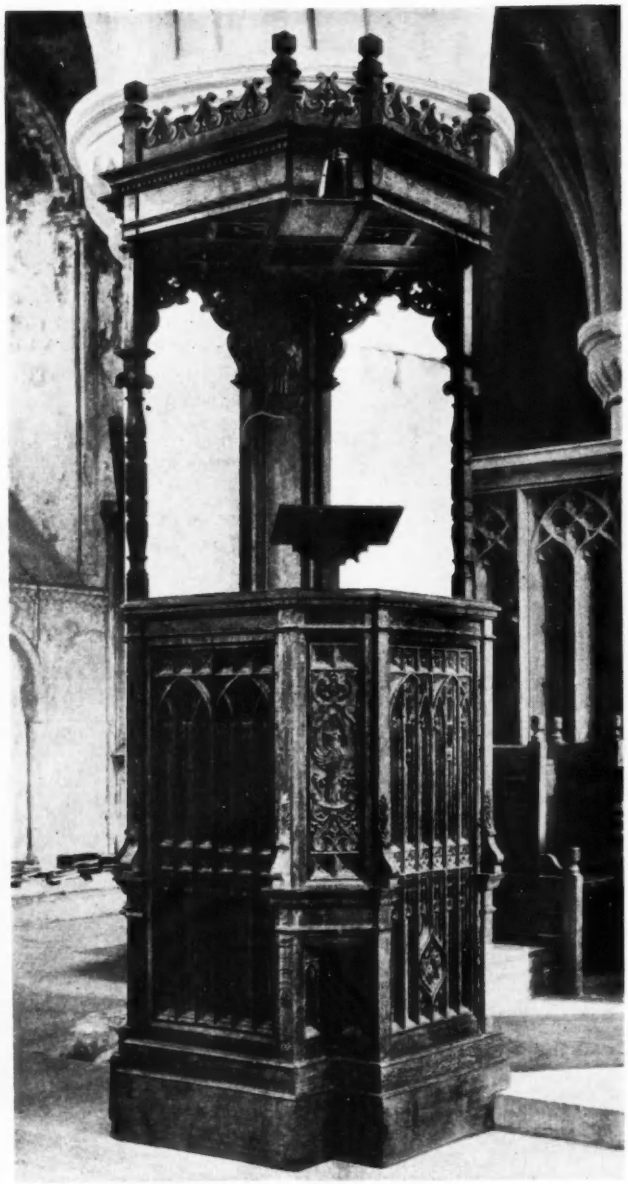




MALMESBURY.
ABBEY CHURCH.

DETAILS OF PULPIT &c.



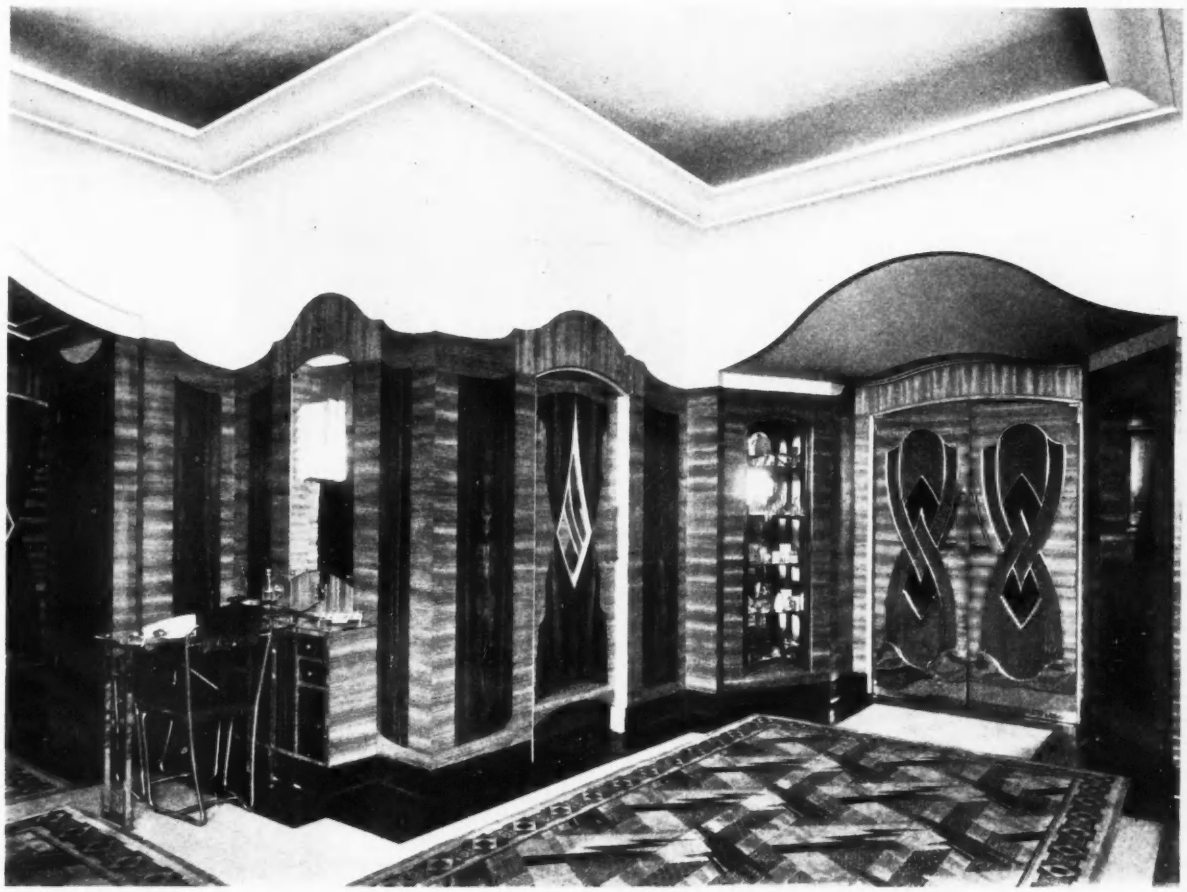


THE PULPIT

FINE ARTS DEP'T.

LADIES' HAIRDRESSING & MANICURE SALON

AT THE STRAND PALACE HOTEL, LONDON — DESIGNED BY OLIVER P. BERNARD

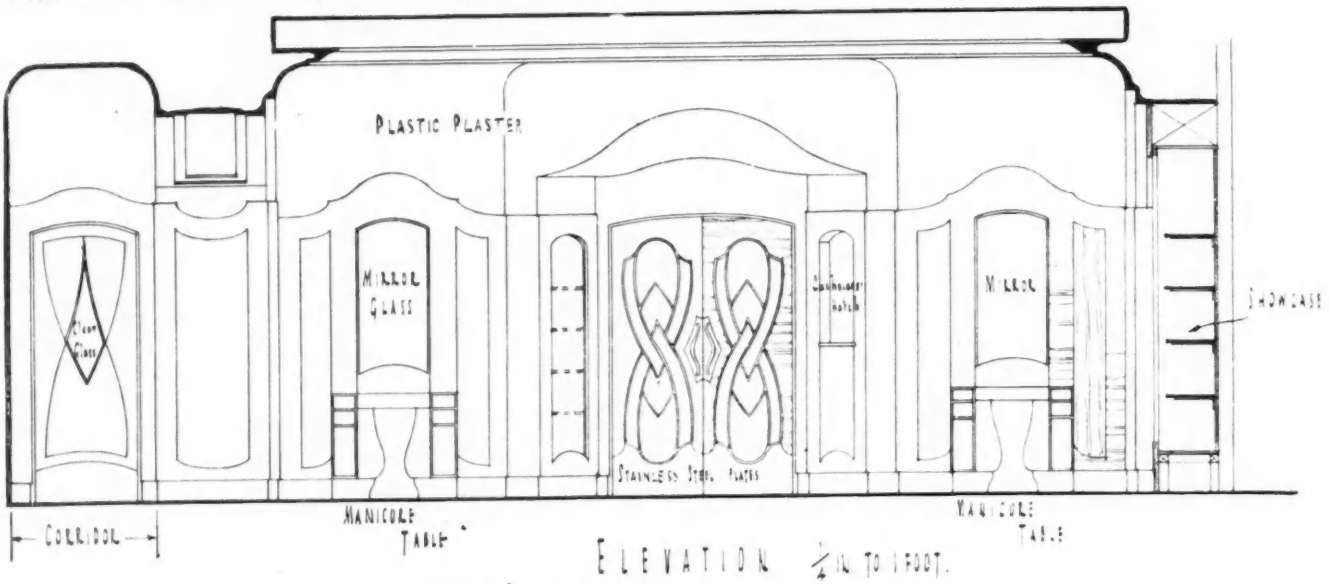


THE MAIN ENTRANCE DOORS AND A MANICURE TABLE

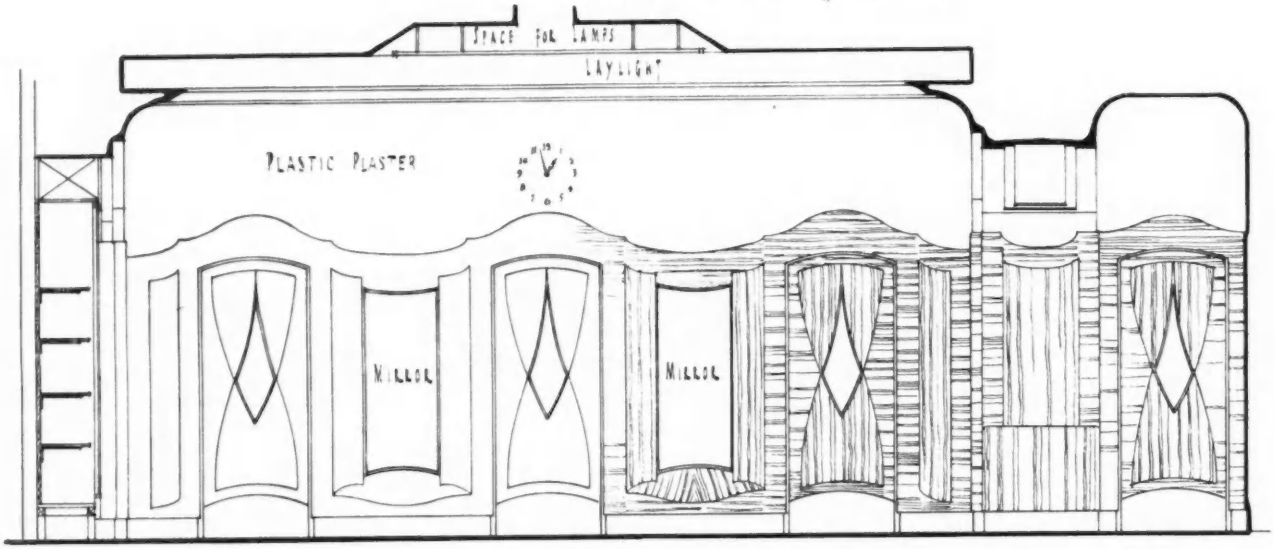
THE walls of the ladies' hairdressing salon, waiting room and manicure salon, of which the photograph reproduced above gives a general impression, and the drawing overleaf some details drawn to scale, are faced with woodwork, wainscot-high, panelled and veneered with African Zebra and Zebrano of exceptionally fine figure. The door frames are of fine-quality solid sycamore, and both sides are faced with the veneers already mentioned, with a centre opening glazed with obscured glass panels. The mirrors introduced in the wall panelling are of polished peach plate-glass, frameless, but studded into position by decorative stainless steel rosettes. The skirting is of black Biancola, polished and coved at its junction with the floor ; this has a similar tile surround with Sienna Biancola centre panelling. The colouring of the floor is thus complementary to the wall treatment, while the ceiling and upper part of the walls are finished in smooth plaster with ivory egg-shell glaze.

The clock face is of ivory herolith, with stainless steel chapters and polished aluminium hands. Herolith has, in fact, here been widely used for the first time in architectural decoration, the wash-basin tops and surrounds, cupboards, showcases and all fitments being finished in this material.

Stainless steel is extensively employed : for example, for the manicure tables, which have engraved plate-glass tops, half-an-inch thick, for the manicure basins and for the electric-light fittings by which the tables are illuminated. The chairs, the first tubular stainless steel furniture made in this country, are upholstered in green leather.



ELEVATION ½ IN. TO 1 FOOT.



ELEVATION ½ IN. TO 1 FOOT.

STRA
PALA
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LADI
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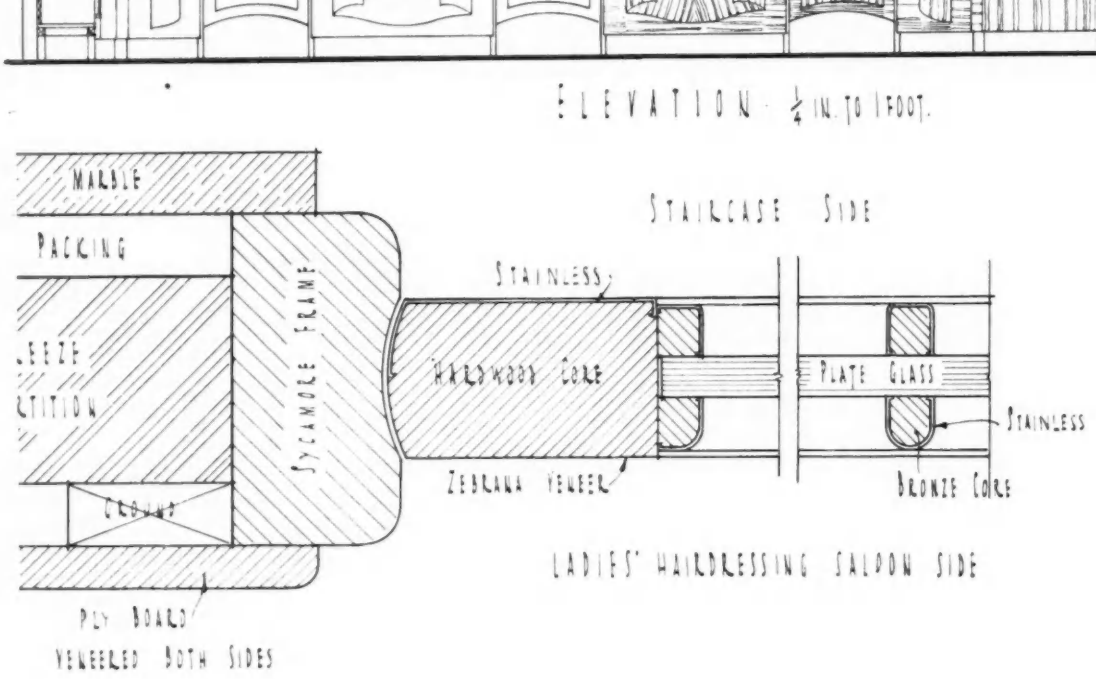


STAIRCASE SIDE

LADIES' HAIRDRESSING SALOON SIDE

DETAILS OF
DECORATION

SECTION OF DOOR AT A-A

SCALE · HALF FULL SIZE

ON CASE

STRAND

PALACE HOTEL_

LONDON_

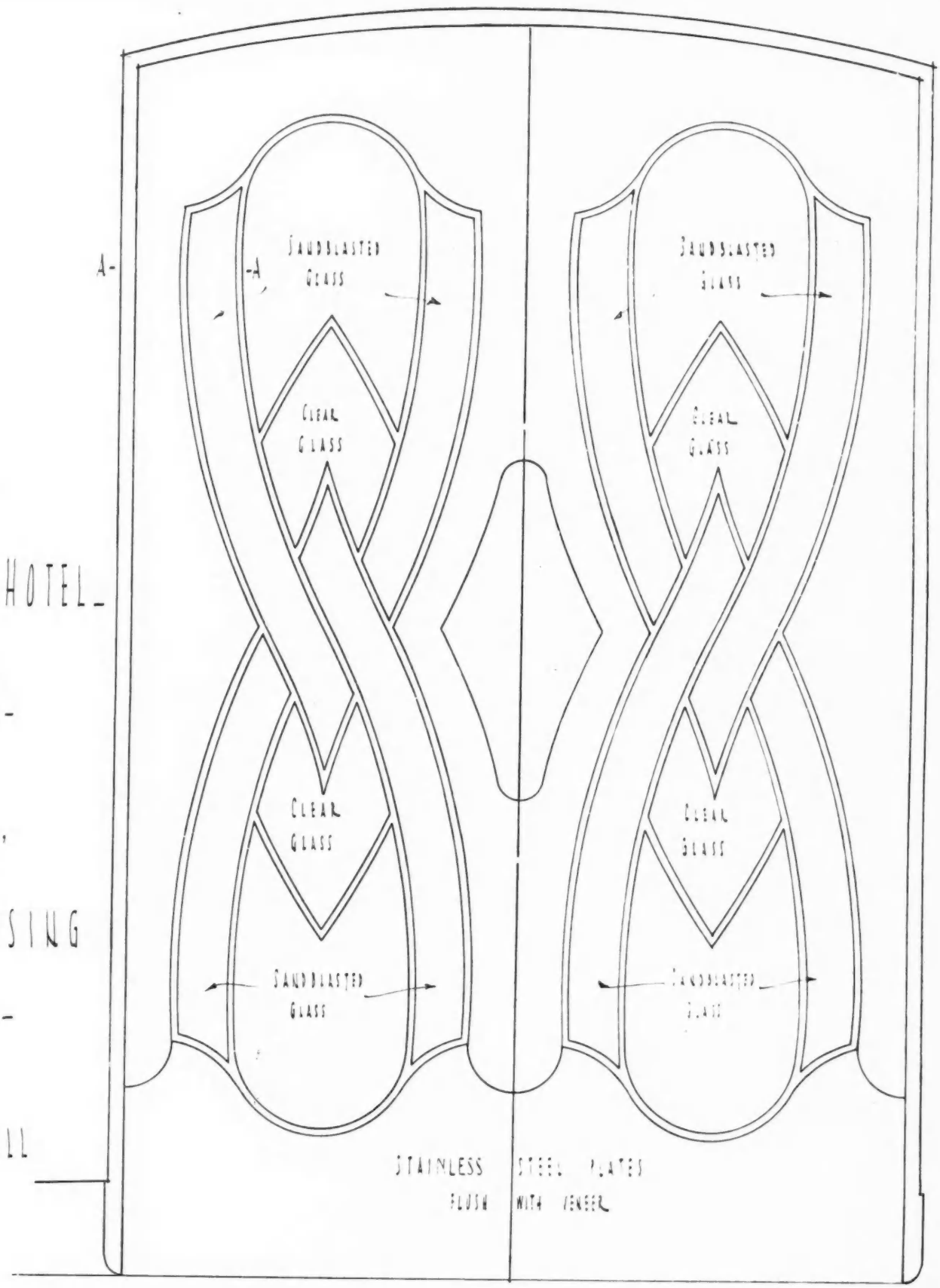
LADIES'

AIRDRESSING

SALOON_

LS OF WALL

LATIONS



SWING DOORS_

SCALE - 1½ INS TO 1 FOOT_

OLIVER P. BERNARD FRIBA.
-ARCHITECT-

SELECTED PRECEDENTS:

THE STREETS OF STAMFORD, LINCS.: III

1. LIVELY ASYMMETRY OF THE SEVENTEENTH CENTURY

FOREIGNERS used to orderly Continental towns at first find the beauty inherent in the variety of our streets difficult to appreciate, and as Stamford is typically English it is full of buildings that fit into no formal scheme but stand isolated, sometimes hidden, taking the traveller by surprise.

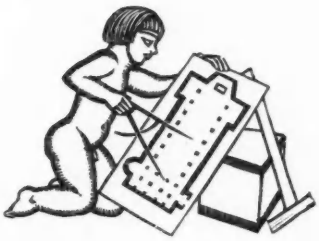
Concealed in a quiet square stands a remarkable late-seventeenth-century house (figure 1) containing features worthy of notice. The linking of the window jambs to the stringcourse is unusual, though here satisfactory, and the inconsequent asymmetry of the ground-floor windows, centred on the front door but not in relation to the house-front, gives life to an otherwise formal façade. The rich textured roof is deep for a house of this size, but scale is preserved by the diminution of the top row of dormers. The elaboration of the chimney-stacks carries uniformity over the whole building by echoing the quoin motif that marks the house wall.

To start life as a covered fishmarket and later become a public library (figure 2) surely constitutes an unprecedented rise from the ranks. The architect responsible for this development has exercised considerable tact and discrimination in the design of his windows, in his glazing and in the choice of lettering, and the finished building is curiously reminiscent of St. Paul's Church, Covent Garden, London.

R. HURD

2. *THE PUBLIC LIBRARY (EX-FISHMARKET)*

THE ARCHITECTS' JOURNAL



WEDNESDAY, JULY 15, 1931

BEATING THE SLUMP

THE speech of the King last Friday on the occasion of his opening a new dock at Glasgow is one we must all take to heart. His Majesty commended those responsible for the vast undertaking because they had shown faith in the future of the nation, and had carried through the scheme in the teeth of the trade slump. They had prepared for the long-awaited revival with sagacious foresight. " The future lies in the hands of the men with brains, energy and determination."

To members of the architectural profession it is becoming clearer each week that the revival in trade is already operative. Six months or a year ago they were preparing few plans—some public-house reconstructions, perhaps, for these are the clubs of the unemployed working men, where they meet to hear of jobs, if possible, and where the keener-witted will gather in groups and compare results for newspaper competitions, before sending-in days; and a few housing schemes and alterations to shops.

But during the last two months business has been warmer. Even South Wales and " the Frozen North " show signs of a thaw. Odd places are humming, like Kidderminster with carpet works, or like Sevenoaks with middle-class villas. There is no doubt that the revival is already operative. Just as pessimism reappeared, when Germany's precarious financial state became known, President Hoover announced his good news, and the revival was emphasized. For we are all glad that America, whose achievements in city planning and building are so worthy of respect, is prepared to help Europe to solve the post-war problem, the problem of bridging the gulf between those who demand and those who supply. There has been no more tantalizing spectacle, for instance, than that of architects, builders and workmen, ready to supply houses, on one side of the chasm, and house-hungry people on the other side of the chasm. For in spite of the void being bridged, as it were, by public authorities, in many instances the picture is still true of vast numbers of people.

We have always dimly suspected that the Reparations business had a good deal to do with this gap between supply and demand. If the Debt settlement continues to have an accelerating effect on the revival we shall consider the case is proved.

" Industrials are steady," we read in the evening paper. The Standard Statistics Company of America, a cautious and conservative agency, began advising the purchase of common stocks as long ago as mid-June. The British prophet of finance calling himself " Toreador " quotes the American super-prophet, Babson, to the effect that " this country will again enter a period of marked prosperity," and " Toreador " caps the remark with " the spirit of constructiveness is abroad." Now that is exactly what architects are finding, " the spirit of constructiveness *is* abroad " amongst leaders of industry.

For the best of the latter have used the period of the slump to think hard. They are now realizing that the architect is the best man to assist them in replanning their factories or in choosing sites for their new works. For the architect has also used the time of the slump as an opportunity for study—the methods of mass production and the use of new materials have been reviewed, office organization has been overhauled, standard specifications and drawings have been brought up to date, and a new integer of the relations between function and design has been adopted.

For Britain, the difficulty will be to avoid the destruction of amenities, in the large amount of building necessitated by the revival. Regional Planning has yet to be understood and appreciated by the multitude, and even the enlightened are apt to vote for prosperity at any price.

Architects have a duty to the nation at large as well as to their clients, and the true economy in segregating factories, in leaving roadways wide enough for future transport, and in preserving streams, and skies too, free from contamination, must be patiently and clearly explained.

The spirit of constructiveness must not construct the means of paying higher dividends and wages only, but the means of increasing beauty and dignity.

In economics *laissez-faire* is dead; in æsthetics let it be damned.

AT PORTMEIRION, MERIONETHSHIRE

The Citadel, the dominant feature of Mr. Clough Williams-Ellis's Welsh essay in owner-development at Portmeirion, is here seen with the Venus steps in the foreground. Behind the campanile is the Prior's Lodging; to its right, Government House. The buildings are colour-washed buff, pink and apricot.

[*From* Portmeirion Explained. *See the book review on page 90 of this issue.*

NEWS & TOPICS

CHARING CROSS BRIDGE

THE Charing Cross Bridge proceedings took a most surprising turn last week. Just when it was expected that the L.C.C. would resolve to go forward with their second attempt to get past Parliament, the resolution was deferred and the Advisory Committee reconstituted in order to re-examine scheme No. 4, which its authors had claimed to have been wrongly adjudged in the chairman's report, not only in certain technical details but in the matter of cost. With surprising ignorance of the true status of the several architects, engineers and town planners who together constituted the group of men responsible for scheme No. 4, they were referred to by Sir William Roy as "a firm of engineers." The outcome of the Advisory Committee's second examination is not known as I write at this moment. If the technical matters are settled satisfactorily, then cost is the main issue, and cost boils itself down to a matter of professional opinion upon the chances of recoupment of the official scheme No. 6 against those of No. 4.

*

I should have thought myself that there could be no doubting the superior chances of development possessed by the open and unobstructed roads of No. 4 against the tunnels and noisome underspaces of No. 6, and remember how little disposed was the Parliamentary Committee of last year to accept the L.C.C. valuer's opinion upon this very important matter. But perhaps the L.C.C. will be taking the precaution of obtaining independent opinion before they make up their minds.

*

Be that as it may, I note with satisfaction the growing element of doubt both in and out of the L.C.C. as to the likelihood of scheme No. 6 ever passing Parliament; and if the authors of scheme No. 4, in refusing to pass over what they considered to be the genuine misunderstandings as to the nature of their plan for assuring the future of the south bank of the Thames, have in any way checked the headlong rush of the L.C.C., then I think we have good reason to be grateful to their fighting spirit, and to Sir Leslie Scott's sense of justice and devotion to public interest in re-examining their proposals.

MR. GREENWOOD AND WILMSLOW

Mr. Greenwood, the Minister of Health, in opening the annual exhibition of drawings by students of the Liverpool School of Architecture, made an excellent and sensible speech in which he traced the rise and fall of architectural taste from mid-Victorian days until the present, contrasting with the ostentation and pomposity of other days the dignity and simplicity of the best work of this age. He lived, he said, near St. James's Park Station, and had learned to admire the qualities of simplicity and nobility with which that building is invested. He could not understand Epstein, but he did realize that his sculpture was part of the unity of the structure.

*

Now Mr. Greenwood, instead of using generalized statements about bad architecture, took a specific example. When he went, he said, to where the well-to-do people lived outside Manchester, he saw some of the worst buildings that ever disgraced God's earth. And that, in my opinion, is a much more useful thing to have said than the usual platitude that goes down for good sense. Observe what happens at Wilmslow, the suburb indicted:

"They weren't built to provide scenery to frame Mr. Greenwood's entry into Manchester" (inferior complex and pique).

"Wilmslow is no worse than any other place" (dawn of realization).

Wilmslow Urban Council have decided to send a letter of protest to Mr. Greenwood (being certain, in their own complacent minds, that nothing is wrong with Wilmslow, they conclude that they must have made a mistake in voting for Mr. Greenwood, who so daringly violates the law of averages). Mr. H. Price (the chairman of the Council), to a voice of doubt among his councillors: "But you don't agree that the houses in Wilmslow are the worst which ever disgraced God's earth?"

Very guarded reply from councillor.

PRESERVING BOSTON STUMP

The tower of St. Botolph's, Boston, better known as the "Boston stump," is to be repaired through money collected in Boston, U.S.A., mainly from descendants of Pilgrim Fathers. This is a very real way of welding the friendship of two countries, so often strained by the passage of much money in the opposite direction. Over £11,000 was handed over by Mr. Walter B. Whiting, one of whose ancestors was assistant rector at St. Botolph's, and the work of restoration will one day have been completed by the joint efforts of little Boston, Lincs.—old-world, and big Boston, Mass.—new-world.

Some time ago Astragal recorded the use of ropes and spars suspended from a captive balloon to indicate the outline of a proposed building. At the Hotel Cecil site this framework bearing a section of coping recently served a similar purpose.

"WET TIME" IN THE BUILDING INDUSTRY

The Conference of the Amalgamated Union of Building Trade Workers laid a good deal of stress upon the need for a satisfactory settlement of the "wet time" question. Wet time is time lost to both employer and employed, but for the workman the loss is total, for the employer not quite so, for much of his work is not subject to the risks of bad weather and can more easily be covered. A recent strike in Scotland established a rate of ½d. per hour compensation pay for wet time, but it is obvious that a more reasonable method of spreading the risks for the workmen must be devised by employers and the Unions. Really efficient employers should be able to afford to pay something to make up the absolute loss.

THE SQUARE OF FASHION

The devolution of London Squares is one of the most significant signs of the changing aspect of the metropolis; but it is only what has been happening for generations. In the days of the Merry Monarch, Soho and Golden Squares were almost as fashionable as St. James's; but as their illustrious residents departed to the Elysian Fields (as one hopes), or to a newer West End (as one knows), first an artistic, then a purely business, character became imparted to these quadrates. So, too, in Early Victorian days, Hanover Square and Cavendish Square divided favour with the newly-formed squares of Belgravia, but in course of time shared the fate that was, later, to overtake such centres in Bloomsbury. Two squares, however, withstood, until more recent days, this tendency of Fashion: Berkeley Square and St. James's Square for long bore charmed lives. At one time the latter was a byword for wealth and fashion. Dr. Johnson somewhere visualizes the highest attainment of a lady's fortunes as the possession of a house here; indeed, the records of its residents, since it was created in Charles II's day, read like pages from Debrett.

★

When Robert Adam contrived the famous house for Sir Watkin Williams Wynn on the west side, could he have supposed it would become the office of a great firm of land agents? When Lord Falmouth's cannon were placed in front of his one-time residence, did those mute reminders of a day that had been so noisily eloquent imagine that they would come to guard the premises of a great bank? And did Brettingham's noble pile, which screens the old house in which George III first saw the light, suppose that it would see the day when it would be offered for rent or sale to the highest bidder? Such structures as have already passed away here, Ormond House and Cleveland House, for instance, may be said happily to have escaped such a fate.

★

It is just upon two hundred and seventy years since Mr. Pepys recorded the formation of the square; and for the best part of that period it was, to use the phrase of the old topographers, "well inhabited." But it is just upon a century since clubs began to invade its privacy, to be followed by the London Library and a branch of the War Office; and Banks and Insurance Offices have long been busy on spots where the *fine fleur* of two earlier centuries had lived and disported themselves.

BUILDERS' PRICES 200 YEARS AGO

In 1734 William Salmon published a book entitled *Palladio Londinensis or the London Art of Building*. It was the seventh year of the reign of George II; Walpole was Prime Minister; and the façade of the Treasury Buildings overlooking the Horse Guards Parade had just been completed. It is interesting to compare the prices of materials and labour nearly two hundred years ago with those current today, bearing in mind that the purchasing power of money was five times greater then than now. Part I. of *Palladio Londinensis* contains specification notes, with prices of all trades, together with "A Table showing briefly the Prices of the Most Common Materials used in Building."

★

Bricks per thousand cost 16s.; tiles, £1 5s. The price of a load of sand was 3s.; and of 25 bushels of lime, 12s. 6d. Gravel was 2s. 4d. a load, while 9-in. square paving tiles cost 10s. 6d. per 100, and hair, for plastering, 1s. a bushel. Oak was 2s. 2d.; fir, 2s. a foot cube; rough deal boarding, £1 5s. per square, or, workmanship only, 3s. per square; straight-jointed boards, £1 8s., or 5s.; deal dowelled floors, £4 10s., or 18s.; feather-edge boarding, 1s. 6d. per yard super; oak fencing posts, 6 ins. square with rails 5 ins. and pales 3 ins. by ¼ in., 4s. per foot, but fir fencing was only 1s. cheaper. Deal bolection panelling was 4s. per yard super, and all deal mouldings worked by hand with a plane from 1s. to 1s. 6d. per foot run.

★

A bricklayer was expected to lay 1,000 a day, and the cost of a rod of brickwork was £5 10s. Flanders brick paving was 3s. 6d. per yard super, and the laying was only 5d., while the bricks themselves cost £1 per 1,000. A square of tiling (the workman to find all materials) was £1 12s. Portland stone was 2s. 3d. per foot cube, and sheet lead, cast or milled, £1 per cwt. Internal plastering with lime and hair was 4d. per ft. super, and external stucco in imitation of stonework, 1s. 6d. to 2s. per yard. The paragraph on plate-glass notes that if the squares are between 1 and 2 ft. in size, the cost is 5s. per foot, and it rises to the largest size squares (4 ft. by 3 ft.), which cost 6s.

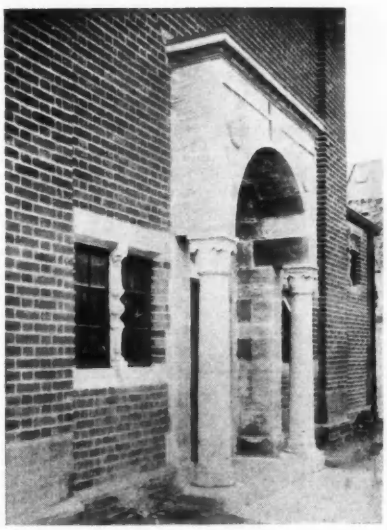
★

An advertisement in *The London Evening Post* of June 27, 1732, is quoted: "Thomas Lovett Glasier of the Green Lamp in Red Lion Street sells the best Crown Glass for 40s. the half case or at 7d. per foot." The same merchant also sold the "Famous Chymical Putty so much approved and used at Gentlemen's Country Houses." But the advertiser ends on a warning note: "N.B. He deals only for ready Money."

★

Painting was apparently a respectable hobby in 1732, for Salmon remarks "that several Noblemen and Gentlemen have by themselves and Servants painted whole Houses without the Assistance or Direction of a Painter which when examined by the best Judges could not be distinguished from the work of a professed Painter." And the house decorator was a greedy fellow, for the amateurs found, when all was done and the mess cleared up, that it had cost them a sum "which at the utmost doth not amount to one fourth part of the Painters price." From between the lines of Salmon's book, one obtains many vivid glimpses of the ups and downs of architectural practice in the spacious days of Archer, James, Campbell, Gibbs and Kent.

ASTRAGAL



BAPTIST CHURCH AT LEEDS

DESIGNED
BY
HERBERT J. MANCHIP

A side-view of the main porch, which is carried out in Ancaster stone. The foundation stone is built in at the foot of the brick wall, and is seen in the left corner.

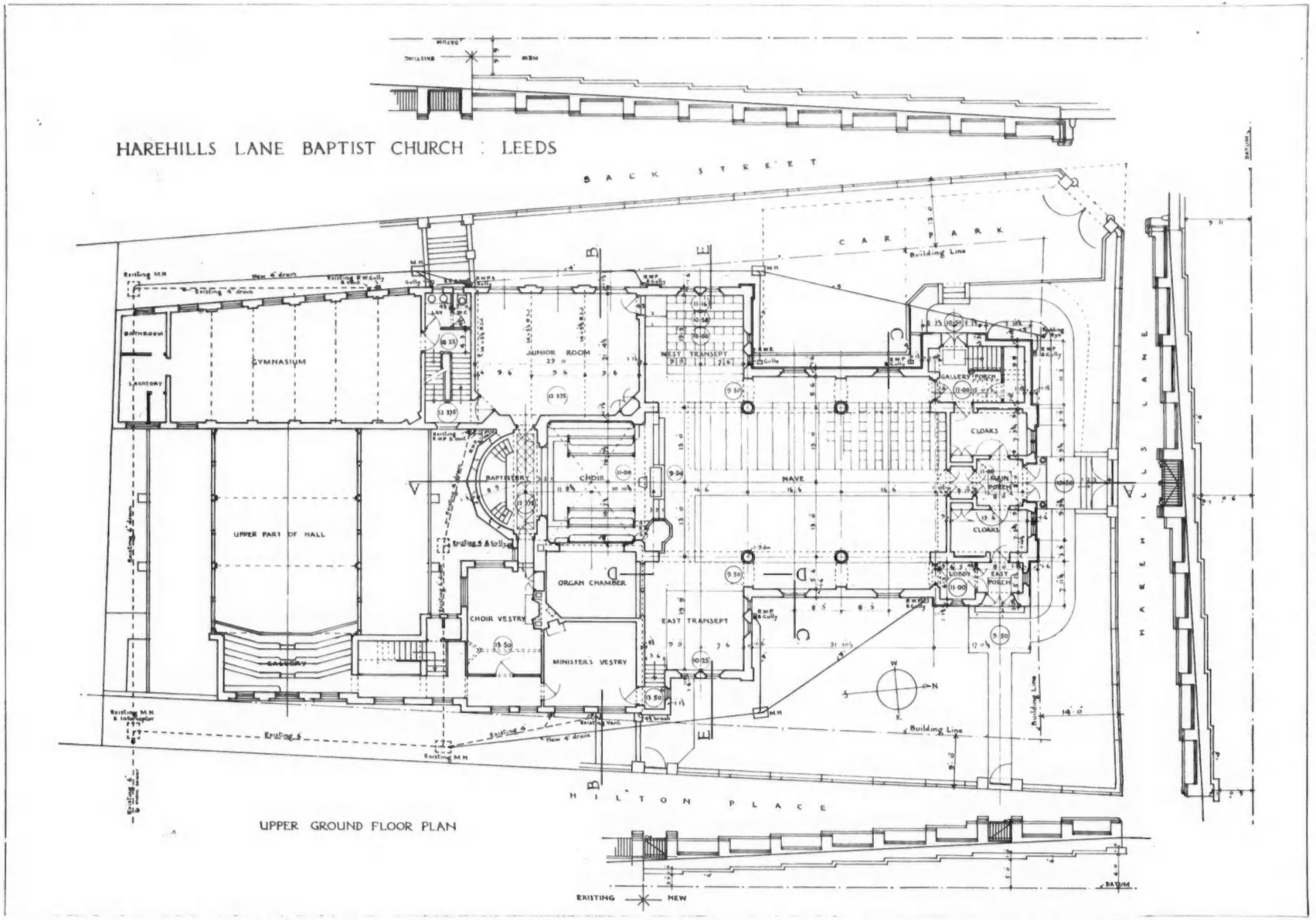
Doorway of the porch illustrated in the view opposite. It is constructed of oak, and is furnished and embellished with wrought iron hinges and studs. Above are tracery lights.

HAREHILLS Lane Baptist Church, Leeds, has been erected on the highest portion of a site sloping away in two directions, the lower parts of which were already occupied by a hall and gymnasium, etc. As will be clear from the plan and sections reproduced on the two following pages, the new portion has been dovetailed into the old with an ingenuity further exhibited in supplying a variety of accommodations ancillary to the church proper. Seating accommodation is provided for about 450 persons, including a small gallery over the main entrance. The need for a staircase leading up to this has led to a slight but almost unnoticeable departure from mathematical balance as regards the north or entrance end. The space for public worship is, however, perfectly symmetrical, and the disposition of the baptistry, behind the communion table and choir, is effective in promoting devotional sensibility.

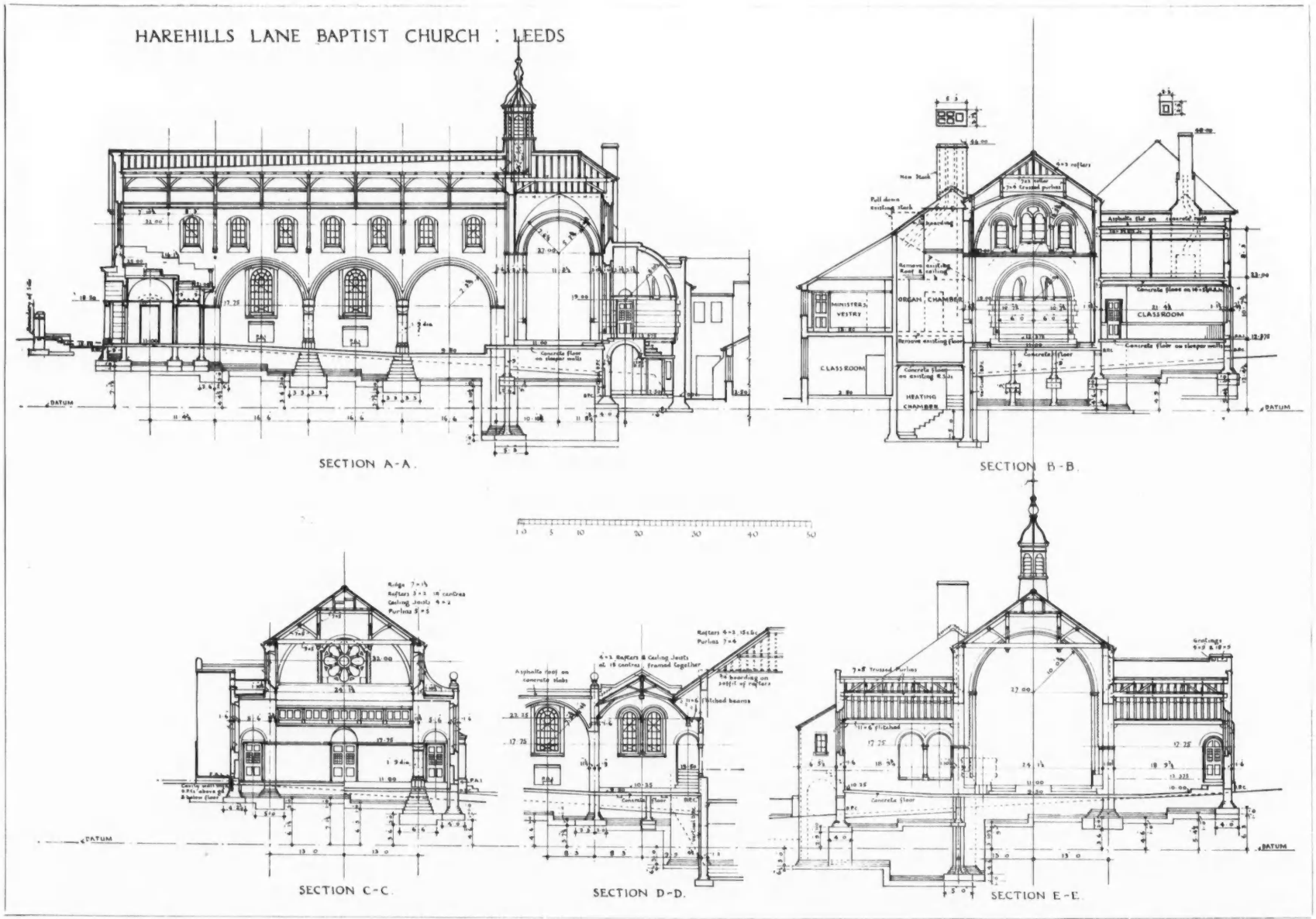
The walls are built of Yorkshire hand-made bricks, with which the Ancaster stone sparingly employed makes a successful blend. The principal roofing material is Cornish slate. Metal casements are employed throughout, and many of the windows are glazed with leaded lights in tracery. All the principal joinery is in oak.

Within, the design derives a quiet dignity from the reliance placed on simple semicircular arches in brick. The outline is carried out in the windows and in the pair of openings forming a screen between organ chamber and east transept, which are filled by wrought metal screens bearing the names of some ten illustrious musicians running down the ages. The oak pulpit, choir stalls and communion table were made by the general building contractors.

A general view of the church from the north-east corner. The materials are brick, stone and slate, and metal casement windows are employed. The main porch, of which details are shown above, is in the centre of the north end, and is seen on the right.

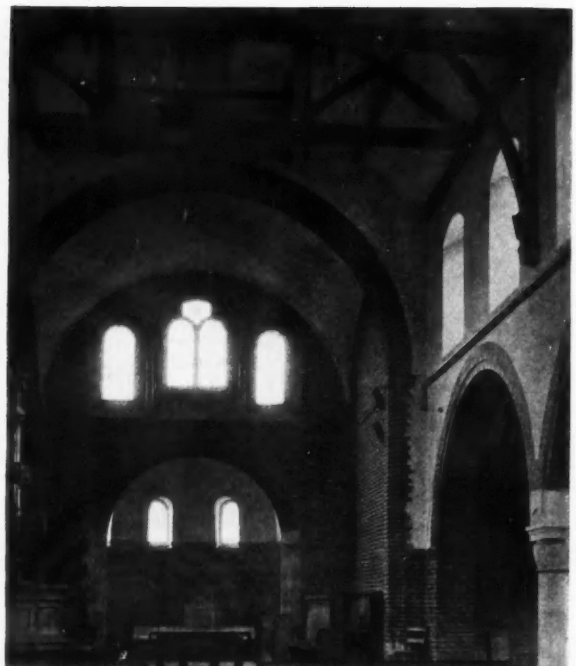


The main floor plan. As will be clear from the general view on the preceding page, the site slopes fairly steeply, and the church proper occupies its highest point. The body of the church is symmetrical about the centre-line of choir and nave, though the remainder is not, owing to the need for a gallery stair at one end and ancillary rooms at the other.

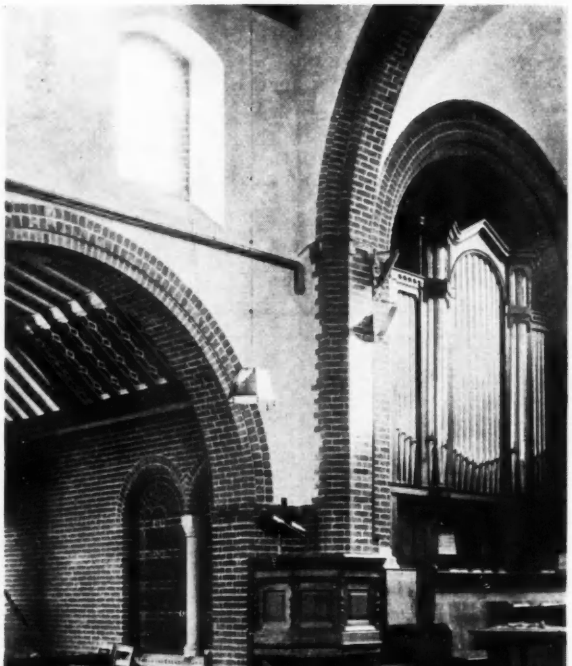


[*By Herbert J. Manchip.*

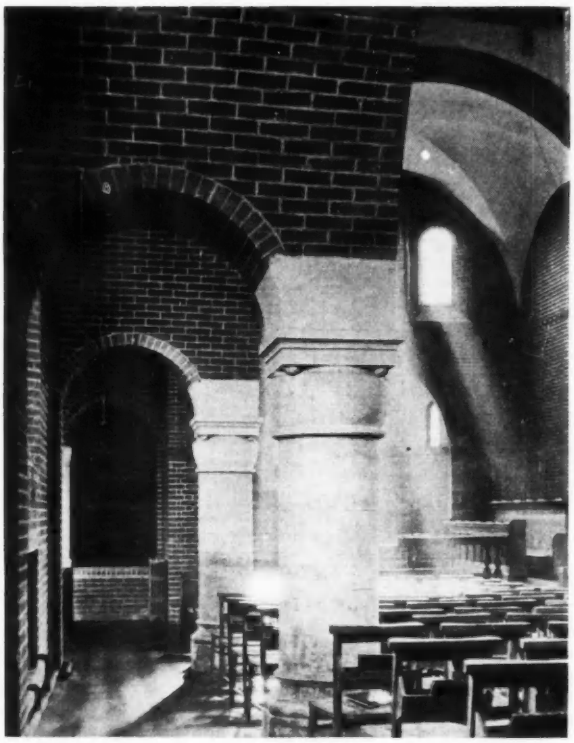
Five sections, taken on the lines indicated on the plan reproduced on the facing page, and reduced in the same proportion. Features are the fairly steep rake of the floor towards the choir—the transepts are also slightly cross-raked—and the domed baptistry. The church provides some 450 seats, including the small gallery.



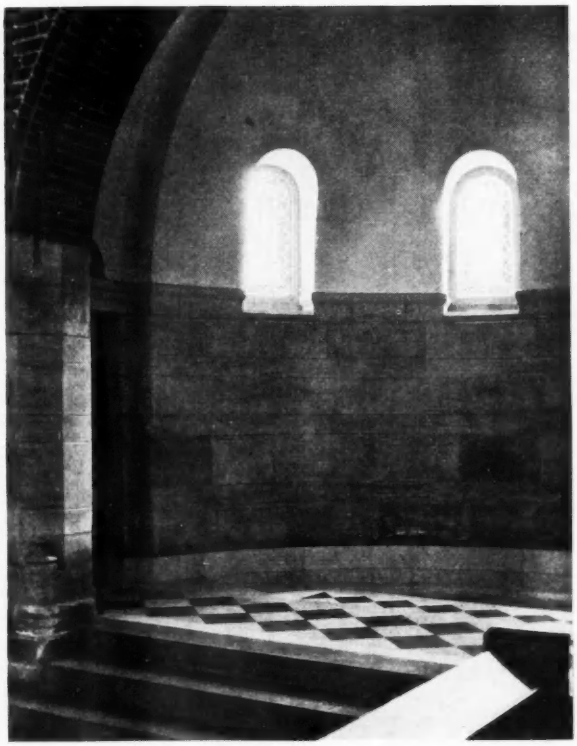
The nave and choir, looking southwards through the arch to the baptistry (illustrated below).



The pulpit and organ, the positions of which are seen in the adjacent view on the left.



The east aisle, the vista of which is closed by one of two organ screens, bearing musicians' names.



A cross view into the domed baptistry from the western choir stalls : it is segmental on plan.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : viii

JOE RICHARDS: FOREMAN

BY KARSHISH

(H. B. CRESWELL)

MY wish to be candid may have led me to disparage myself unfairly. I was not inept : my shortcomings lay, not in the things I did, but in my manner of doing them. I was right in refusing the builder's hospitality; and I was right in calling for an early start, in requiring consideration for the postal work and in pressing for a well-considered scheme of operations; and although I taxed the patience of Father and Mr. George by my hesitation in believing that the result of doing things their way was the same as doing them mine, I was, nevertheless, always ready to refer any points in dispute to Tallard. However, after my first references had been returned to me curtly minuted "Yes. See Specification. R.T."; or "Certainly. Question need not have been asked. R.T.", I was so powerfully armed that I had merely to mention Tallard's name for Father to wince and make a discomforted withdrawal, as though he had been a dog threatened with a stone.

Poor Father ! With the best intentions I made things difficult for him, whereas, had I been better informed, I might, with no remission of conscientiousness, have lightened his task. Tallard, of course, was not going to knock holes in his compact, watertight specification to suit the convenience of the builder; and he would have required good reason indeed for not upholding the decisions of his clerk of works. Good reason would, however, have been far to seek on one particular occasion when Father refused point-blank to do what I told him, and when the need for Tallard to come down and arbitrate was only prevented by the resource of Joe Richards, the foreman—as will appear.

At my first interview with the builders it became clear that they depended on Joe Richards, for they met my every demand with the promise of due attention "just as soon as ever Richards comes back"; and I do not think they could have taken the roof from over the head of the irascible and inflated postmaster, and got the work carried through at all, without him. Richards did not show up in the following week as had been promised me; nor were there any signs of him in the beginning of the next, so that the chaunt, "just as soon as ever," etc., on the lips of Father, of Mr. George and of even a clerk in the office, which at every turn opposed my urgency, became positively loathsome to the ear. However, on the second Wednesday after my arrival I observed scaffold poles being planted in barrels of sand along the footway in front of the building. Richards had come back !

I do not think that men of the stamp of Joe Richards are bred anywhere but in England, or found outside the building trade. I got to know him as intimately as he would permit; but time has given me a better understanding of him, and he has grown in memory since those far-off days, so that I now recall him with an esteem which touches on affection. My recollections of him are so vivid and so voluminous that I scarcely know where to touch on them.

Joe Richards was a short, broad-shouldered, wiry, muscular man, with a bright, limpid, blue eye like a child's, and a bushy, light-brown beard, which usually carried a crumb or two of plaster, a shaving or a half-burnt match. He was short in body, with long, sinewy, bandy legs; and the power, wise caution and cheerful endurance those legs expressed as they bore him in smooth, effortless strides along planks and up ladders, were eloquent of his personality. He seemed to be about forty, but his eldest son was thirty-one, he told me, and his nine children all out in the world except one daughter, who had met with an assidence and got her leg put all crooked like, and who kept house for him; and it was characteristic of his marvellous vitality that he never slept more than four hours. He told me of the crippled daughter in the cheerful, high-pitched, singing voice, with a note of astonishment in it, which he always used, and which gave such force to his whimsicalities.

The death of his wife had evidently been a great blow to him, for the calendar of his life dated from that event. "Just four years 'afore my wife died"; "Just about the time my wife first took ill"; "My wife hadn't been dead mor'n three years"—such was his common way of fixing the dates of the inexhaustible experiences which I egged him on to relate; and I much question whether any woman had a finer memorial than this daily tribute on the lips of her husband and father of her children. Her Joe, however, did not particularly keep her memory green in other ways—or at least he took some trouble to let me suppose he did not, for his fun was always just over the horizon.

He was one of the old order of foremen that is fast passing out of knowledge, and owed his position not to any literary acquirements, but to his capacity, his mastery of building practice, and to his ability to take responsibility and to organize. He never made a note, but kept dimensions and everything else in his head; and he wrote, and even read, with difficulty, owing partly, I believe, to his spectacles, which were horn-rimmed, and had, he told me, belonged to his father; and "my son," he said, "can have 'em arter I've done with 'em, for they're good old specs, they are."

Once, at a time when the postmaster was, with good reason, on his hind legs frantically pawing the air, I came to the building and found two labourers hard at work screening the accumulations of broken plaster which loaded the space where the floor had been. I went to Richards, in some annoyance, for an explanation.

"They're a-looking for my spectacles, sir."

"Looking for your spectacles ! What do you mean ?"

"Why, I dropped my old specs somewheres about last night in the dark, and they're bound to find 'em, sir, if they screen out the rubbish."

Richards was first and foremost a craftsman, with all the craftsman's pride in himself and in a good job. He was no looker-on and director of others, but identified himself with the building as the leader of the men and a sharer in their work. If Joe was not in his shirt-sleeves it was a sign of bad weather indeed. He was a bricklayer by trade, and took a delight in turning to and doing any awkward or particular bit of work with his own hands. "That's mine," he would say. "That's waiting for me, that is—soon as I can find a chance to tackle it." He was completely ambidexter and would change about freely from right to left to rest himself or as suited his purpose, and I have seen him lying on his back in a trench for the better part of a day cutting away under an old wall in preparation for underpinning—a job that could only be got at left-handed. He had the affection for his tools which belongs to the craftsman in all callings, and which is so delightfully presented by George Bourne's record of a Surrey labourer in *The Bettesworth Book* ; and he had a doting admiration for materials, which included bricks and sand, and even extended to individual planks and scaffold poles.

"Here; let that be ! Bring that there back," he suddenly broke off in his high singing voice, to a labourer who was carrying off a short length of battered old scaffold pole. "Go on;

put that down where you found it."

"You never know what them foreign chaps will be up to," he said to me. He called all of his men "foreigners" who did not belong to "Brayness and neighbourhood," as the local paper termed it.

"Why, what's the matter ?"

"That's my old gantry, that is. Had 'un since before my wife died. I've slung seventeen hundredweight with that there before now. There's not a knot or a flaw in 'un."

This was all fair and square. It was also all fair and square when he said one day, pointing to a dirty old bit of wood—as I esteemed it :

"See that slat, sir ?"

"What about it ?"

"Well, you won't see another like that 'un. That's mine, that is. That's a bit o' real red pine, out of Canada."

"Oh ! Is it ?"

"Yes, sir. It's my straight-edge, when I wants a good 'un. You can take and throw that in the sea, and put in the sun, and that won't move. I got that at a sale of old stuff where Father asked me to try and pick up some shuttering I was short on. It were just arter my wife took and died, and I've had that ever since. You won't scarcely ever see another like that, sir."

Much of Richards's talk was, however, coloured by a whimsical humour which was so subtle that to this day I do not know how far he was quizzing me and how far he was serious.

One day, for instance, he suddenly stood while we were walking together.

"This here old board I'm standing on, sir," he said, his face, with its clear, inscrutable eyes turned up to me; "that's mine, that is. That took and saved my life once, that old board done, and Father give it to me. That go about wherever I go, sir, and I allus has it for my gangway so it won't come to no harm."

Richards's eye was always so bright that there was never room in it for any augmented glint of joy, and the rest of his countenance was so involved with his beard that other expressive features were veiled. I never in all those months knew him once to laugh, and none could tell whether he smiled; yet in his mind, I fancy, he was always laughing, for his utterances were tinged with a mischievous waggishness which led him even to make ironical fun of his own seriousness as well as of mine, so that I was slow to recognize it although I was aware of unexpected draughts which threatened to un-hat me—so to speak—and leave me exposed. It was the quiet, observant demeanour of some of the older hands when Joe was launched upon reminiscence that first made me suspect he was keeping all the fun to himself by playing up to my perplexity at his apparent simplicity of mind. It is clear to me, now, that though he might be attached to the old plank that had took and saved his life, he was chiefly engaged by the absurdity of his sentimental regard for a wretched old scaffold board which he daily trod under foot, and was amusing himself at the expense of my credulity. In spite of his quizzing of me—for there is no doubt he freely indulged himself in that wickedness—he was never by word or sign disrespectful; and I never had a blunt word from him, much less a surly one, although, God knows, I often gave him cause enough for remission of his enduring cheerfulness.

He was an extraordinary man. His childish frankness of manner hid a reserve so deep that one never knew what he really thought or felt; and his resources of humour and quiet tact frequently saved difficult situations. It was, however, as a reservoir of information that I chiefly remember him. He was no theorist, but favoured the empirical method of acquiring knowledge, which he imparted always by anecdote spiced with whimsicality—but how far consciously spiced I cannot determine. Perhaps others may see more deeply into this delightful man's nature than I can. There are a score of different fields in which I could display him, but I will take that of mortar, for I early became lost in perplexity at the way lime and cement ignored most of the rules laid down for them in the books I had brought with me—which books were my sole source of knowledge. If they failed me, I was lost; and I turned to Richards in the hope that he would re-establish my confidence in them. His singing, high-pitched voice, with its rising note of astonishment, must be imagined.

"Some limes is fast, sir, and some is slow," he told me; "and the slow sets the harder in the long run, I reckon; but the weather has a lot to do with 'un, and so's the sand. Now, that there sand we used at Bigtons—the Dower House, they call it—two years back ! It were sharp and nothing to complain about, but that there took and turned, sir !"

"Turned ?"

"Yes, sir. Took and turned sour."

"Turned sour ! What do you mean ?"

"Well, I reckon it done, sir ! Held off. Go sulky like. Wouldn't make no start. I washed some on it, but *that* didn't please 'un, so I had to wait. Father got in a state when the architect complained, and told me to gauge 'un with a bit o' cement; but that there wasn't satisfied even then, sir ! Nothing I could take and do wouldn't please 'un. I reckon lime wasn't good enough for that; that wouldn't take up with nothing but cement to my way o' thinking. That kep' me waiting a rare time, that did."

"What were you waiting for ?"

"Waiting for the mortar to set ! You can't go on ahead o' the mortar, sir. That's what happened along o' the Fire Station look-out tower by Polders market-place four year after my wife died. 'Get on ! Get on !' says the architect. Well, I told 'un how it were with the mortar that slow and the joints half-inch and an eighth, but he didn't take no heed and I had to get on to satisfy; so I *get* on. Well, we go right up fur as a bit of corbelling there were under the coping and then, sure enough, that old tower took and shut up."

"Shut up !"

"Yes, sir, that shut right up, that done."

"But I don't understand."

"Why, shut right up, sir, like one of these 'ere concertinas ! The mortar couldn't stand up to the weight on top of 'un, and that stood out all over better part of an inch in places; and that spilled along the ground nigh a foot high all round, that done, before it got finished, sir. First I knew was the men coming down overhand. I shouted, 'Who blow the whistle ?' but they'd felt her move, and down they come."

"How did you put things right ?"

"Pull right down and build up again, sir."

"Good gracious ! What did the architect do ?"

"Go off the pier, sir."

"*What !*"

"Go off the pier — jump in the sea, sir ! Don't say nothing to Father about Polders Fire Station, sir. It's that what drove him off his head. There was going to be a law action or summat, but that came to nowt after Mr. Grainger went. We got paid for all in the end. It weren't no fault of mine, I reckon."

"I suppose the architect ought to have specified cement mortar," I said.

"Well, that carry on too, sir ! There's times when you don't know what that'll be at. It go rancid like, I reckon—turn rotten, same as fresh water will take and do, and come all right arter. There was them anchor beds for the pumps down at the new sewage works, seven by four by five feet deep they was, solid; two of broken flint, one sand, one cement : two on 'em was all right and t'other was all wrong ! How do you account for that, sir ?"

"How do you mean—all right and all wrong ?"

"Well, two of 'em you could search with a twelve-pound sledge and they rung same as they'd been blocks o' granite; but the third, arter three weeks, was that green we took and

broke 'un up with picks. That hadn't set at all hardly, for all it was mixed in the same mill with the same water and the rest as t'other lots. I reckon the cement had took and gone mouldy.

"How could it do that?"

"Well, Father dunno, and he knows a lot; and the municipal engineer, he dunno neither. The only thing I can make on't is an unhealthy foreign chap I took on—a labourer he was, and I put him to spading into the mill. Well, sir, I reckon he got spitting into the pan, and that's what turned *that*. He had to go to hospital soon arter and died there all eat up—a rum go, wasn't it, sir?"

"I don't understand it."

"No, sir, and there's plenty others what don't, neither; but this here Portland cement is fancy goods what'll always hit back at you when you don't expect. When we were digging the butts up on Radder Down about the time my wife took ill Father told me to make a safe lock-up for the barrers and picks, so I built 'un in nine inch with a lot of throw-outs I had, and put an eight-inch slab of seven-and-one broken chalk and sand concrete, over, to roof 'un. That wouldn't be more nor twelve foot square inside, and after ten days, when I took the centring down, that was as hard so you'd think nothing could bust her; but what do you think that go and do very next day, sir?"

"What?"

"Why, that old slab took and sot down!"

"Sat down!"

"Yes, sir. Sot right down, that done, and broke the barrers and spilled the walls over, and I reckon it was all along o' being thirsty. I had a tarpaulin over, but what with the sun and the rare lot o' wind there was, I reckon that got thirsty and that turned her. You wouldn't hardly credit the deal o' water a bit of concrete will ask for, sir. That'll lie under a week, and scarce drink all that want then. Lime don't ask for none scarcely—fat lime, anyways. I've seen that washed right out of walls in a thunderstorm and run down like so much milk, sir!"

"What's fat lime?"

"Why, hot lime—Dorking lime—chalky lime, that come all greasy-like in the banker arter you slake it: same as what the plasterers beat up for putty. Then there's stone lime, sir, and *that* come over queer, too, sometimes when you don't reckon! When we built that shop for Mr. Flick, the butcher, down middle of Beach Street under Mr. Titmus, I was short of cement just afore we finish running the length o' cornice there is along the top there. Father come along and says, 'Make do with a bit o' lime and get done with; no call to send up to yard for that lot,' he says. There warn't more than two or three feet to the return end where the Bank began, and I run it with some Abernethy grey stone lime I had there, made up strong, two-and-one, to finish and make a job. Well, sir, I didn't take any particular notice till two or three days arter, when Mr. Titmus came to me in a rare stew because Mr. Ferringer, the bank manager, had writ him a letter complaining as what we was encroaching on 'un; and, would you credit it, sir? That had took and grow a matter of near three inches! That there cornice *grow*, sir! It grow!"

NEXT WEEK—IX: TRIALS OF A CLERK OF WORKS

The previous instalments appeared as follows:

May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.

LETTERS FROM READERS

Cant About Rural England

SIR,—Sir Peter Chalmers Mitchell has done work in the zoological field for which he deserves our gratitude, but we who are concerned for the face of England can scarcely applaud his recent utterances on rural amenities.

Surely he knows that "pestilential nonsense" is talked about every mortal subject ever discussed by man, and it is neither scientific nor illuminating to quote the minority views of sentimental numskulls and then perform the easy task of proving them foolish.

I haven't a doubt that Sir Peter is not so Philistine as the reports of his Oxford address would make him appear even to those who know (or can guess) what he really meant to say.

To the beauty smashers generally, however (who are ever on the look-out for support), his attack on the picturesque is likely to be read with satisfaction as a chit for just that brutal dunce-building (whether of houses or of roads) that is so needlessly rubbing the bloom off England.

No decent person who has a little imagination could do other than deplore the existence of "rose-clad hovels," but if he is moved publicly to announce his views, his imagination should also make him realize the need for making it quite clear that it was the hovels that he objected to, and not the roses.

There were plenty of "practical" people with compassionate hearts in the Victorian era who yet had no eyes, and who would have cheered Sir Peter's speech (as reported) to the echo.

The rose question (which I take to stand for amenities generally) would have troubled them not at all, whence the Peabody Buildings, West Kensington and Crewe.

CLOUGH WILLIAMS-ELLIS

SIR,—Without knowing the context of the words you quote from Sir Peter Chalmers Mitchell in the paragraph "Cant about Rural England" on page 38 of your issue of July 8, it is impossible to judge of them fairly. In extravagant language, such as is used by some public speakers, he indicates a truth. People who are not thoughtful, whether they are on the outskirts of the "Preserve Rural England Group," or among the number of those who will commit any barbarity so long as they are told it is in the interests of "modern progress," are liable to do humanity much harm.

Those who work sanely for the good of humanity balance as well as they can what is to be gained or lost by changes, and they are not mesmerized into placing a false value on beauty or age, nor are they fearful to deny *that* "*modern progress*" which follows in the train of those who make changes with stupid delight at the utterance of these two words.

Change is inevitable in the world. It is of its very nature; and beauty is desirable, whether newly created or growing old. These qualities of life are in man's control, and those who devote their lives to the study of either are serving the people; they are better honoured together, jointly.

While it is good to be aware of existing beauty and seek to avoid its destruction, the goodness that strives to obtain beauty in changes is, perhaps, more useful to mankind, for without such care the future will have little to enjoy.

The man who succeeds in assembling modern cheap materials in a roadside house, so that it offends none and pleases some, deserves our thanks more than he who builds new buildings in an old-world manner; for the latter builds for the richer few, and builds in a manner that lacks the merit of common-sense economy, and in one that is very easy, for examples are plentiful.

A. R. POWYS
(SECRETARY, THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS)

A Neighbour of the Bank

SIR,—I might give a parliamentary answer to Mr. Leathart by replying, "That is a hypothetical question," but I resist the temptation, for I have no wish to score off him or anyone else.

It seems to me that the exercise of

architectural courtesy must vary with circumstances. It is conceivable that existing buildings may be of a temporary character, or may be unworthy of consideration, as in America, where a Greek temple, a Swiss chalet, a schloss, a mediæval castle and a bungalow are found in close proximity. Or it may be that arguments for and against an innovation are fairly equally balanced, as shown in recent correspondence in *The Times* respecting the rebuilding of the east side of Trafalgar Square. Each problem must be settled on its merits and having regard to the purpose of the new building. Nevertheless, we are familiar with the type of new building which rises, big and blatant, like a parvenu amongst decayed gentlefolk, and offends the eye because its designer did not take thought for the surroundings amongst which it was to stand.

The Bank of England covers an area of four acres: it may be expected to remain, as now altered, for the next 100 years, and I venture to think cannot properly be ignored by architects of neighbouring buildings without offending our sense of good taste.

NATHANIEL LLOYD

Lowest Tenders

SIR,—Every right-thinking architect will agree with "Suburban Builder's" general contention, which I understand to be that, when the competing contractors are selected firms of good standing, the lowest tender should automatically be accepted, and I believe that in the great majority of cases this is what actually happens. Unfortunately, there have been cases where the invitation to builders to tender has merely been camouflage to cover the acceptance of one particular firm's estimate. In such cases the reasons are sufficiently obvious. This does not invalidate the principle stated above, but only goes to show that some of those connected with the building trades, as in all other departments of human activity, are weaker vessels, subject to a falling away from grace.

There are, however, other aspects of this question which are not dealt with in your correspondent's letter. To give an example: A short time ago I invited tenders from several firms, all of good standing, and the prices submitted, with one exception, were within narrow limits of each other and agreed with my own estimate of the value of the work. But one contractor gave a tender some hundreds of pounds below the others, a price for which it would have been impossible for him to carry out the job without heavy loss. On investigation, it was found that his estimating clerk, having been hurried in getting out his figures, had omitted to include several large items.

On page xlvi *of this issue is printed a first set of motto labels for the Second—July—Holiday Sketches Competition. The rules were printed in full in* THE ARCHITECTS' JOURNAL *for July 1.*

What, then, was to be done? Acceptance of the lowest tender would have involved the builder in serious trouble, which would inevitably act to the detriment of the client, while refusal to accept deprived the client of an unexpected but, nevertheless welcome, pecuniary advantage. In effect, this particular problem was tackled to the satisfaction of all concerned, but it would be of interest to know what your architect readers would have done in such a contingency.

Considering the enormous volume of building work which is tendered for in this country, I venture to suggest that builders very rarely have cause to complain of any departure from impartiality and fair dealing on the part of the architect.

REGINALD A. RIX

SIR,—I cannot believe that the practice of obtaining "Check Tenders" is as common as "Suburban Builder" would lead us to think, but as he has ventilated his grievance an observation or two on the subject may not be amiss.

In the first place, it must be agreed that the procedure is, as your correspondent says, grossly unfair and, in my opinion, renders the architect liable to an action at law, for where tenders are invited for the performance of work the person inviting the tender would, it would seem, be liable to pay the tenderer a proper remuneration for his services if the information so obtained be made use of otherwise than in a legitimate manner. The beginning of the trouble is the selection of the list of builders to be invited to tender. If this selection is made with care, then there should be no reason for accepting any tender but the lowest, provided, of course, that the tender has been properly prepared and is for a sum at which, in the architect's opinion, the work can be properly carried out. An invitation to tender implies faith in the integrity and ability of the builder to perform the work; and if that faith is wanting, then that builder ought not to be involved in quite unnecessary trouble and expense. The custom for the lowest tender to be accepted has, I believe, been recognized by the courts as a reasonable custom.

F.R.I.B.A.

LAST D.I.A. LUNCH DISCUSSION

The Decoration of Ships

THE Design and Industries Association held their sixth and final luncheon at Gatti's last Thursday, when Sir Alfred Booth presided over a discussion on the interior decoration of British passenger ships.

Up to the time that Germany, France and Sweden designed ship interiors upon which really original and creative thought had been expended, British shipowners and designers were secure in the thought that no one could better them at their job of reproduction. That they have been shaken in their complacency is shown by their almost frantic efforts to achieve "*art*" in the *Empress of Britain*. They went the wrong way about it, of course, and the interiors by academicians and artists of infant drollery remain what one would expect them to be. One cannot compare them with the responsible and really distinguished work aboard the *Kungsholm* or the *Bremen*. Much as one would like to compare them one cannot. They are dissimilar things.

Everyone speaking at the meeting must have had these examples in mind, though Sir Charles Allom and Mr. Ashby Tabb, who represent the good old days and reproductions of the good old days, could not allow that there was lasting excellence in the new work, which, indeed, they confess to not being able to understand. If I heard them aright, I understood them to be a little in doubt as to period work (for which I am glad) but still determined to give the public what it wants—vain phrase! —and to make it bright and light, whatever that may mean.

The feeling these experts gave me was that though they might be eminent in their sphere of commercialized decoration they were really devoid of philosophic basis and could never hope to produce original work.

Mr. Clough Williams-Ellis sowed the right seeds of doubt when he showed how well the *Bremen* and *Europa* were weathering the storms of transatlantic competition, as much through their decoration as anything else.

I don't know what Mr. Howard Robertson means by "a certain museum feeling" in ship decoration, nor how such feeling can possibly go with the modern spirit. I personally dislike any "museum feeling" in a ship, and agree with Mr. Williams-Ellis that if we are in doubt as to what the public wants, then we might design simply, economically and without over-elaboration. That would be a change that might be welcomed with surprising fervour.

LUXURY FLATS,

Hampstead Heath, N.W.

DESIGNED BY
YATES, COOK AND DARBYSHIRE

ON the summit of Hampstead Heath, "Bellmoor," a large block of modern flats, has been erected. The architects, in planning and detailing, have endeavoured to produce a comprehensive scheme, embodying all the latest developments in luxury-flat construction.

The building comprises eighteen flats, a lock-up store on the lower ground floor to each flat and a large garage under the forecourt, independently approached by a slope from a private road.

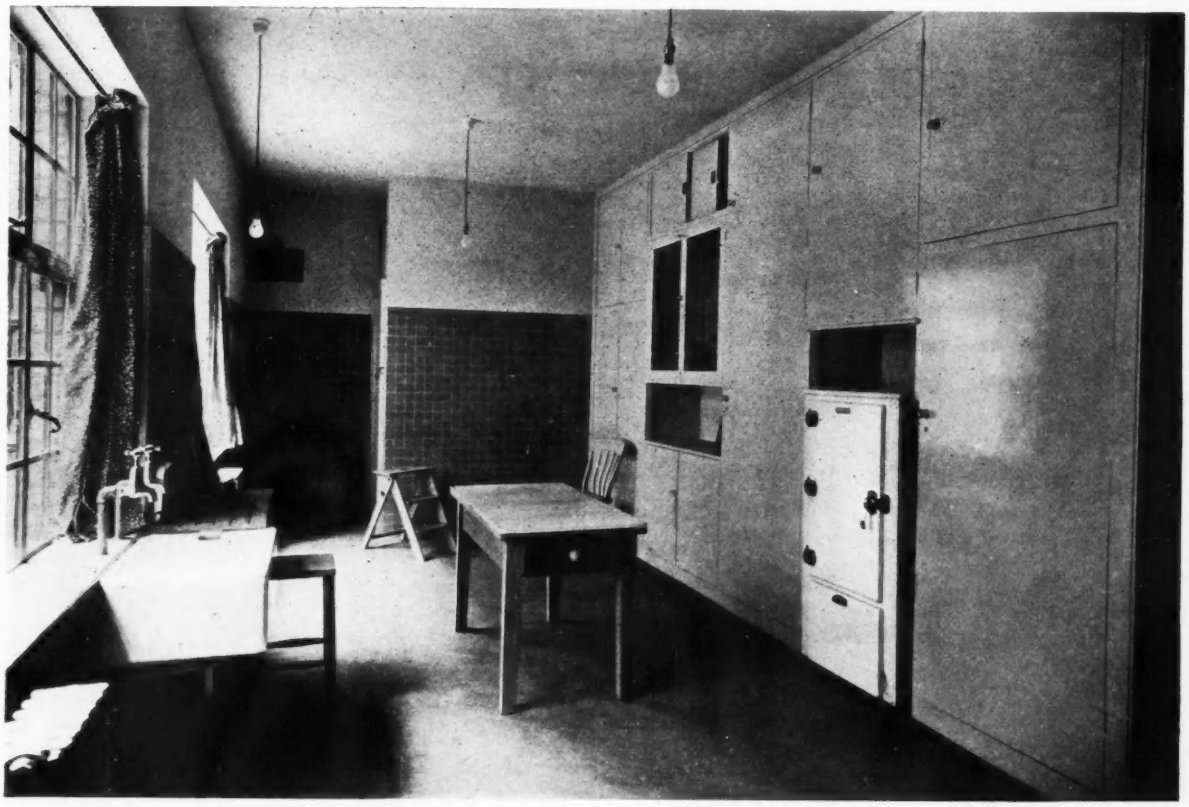
It should be noted that advantage has been taken of the slope in East Heath Road to incorporate two flats at a lower level, the remaining four floors having four flats per floor. A small caretaker's flat is also provided at the low level. A feature of the planning is the arrangement of all scullery doors around one central service staircase.

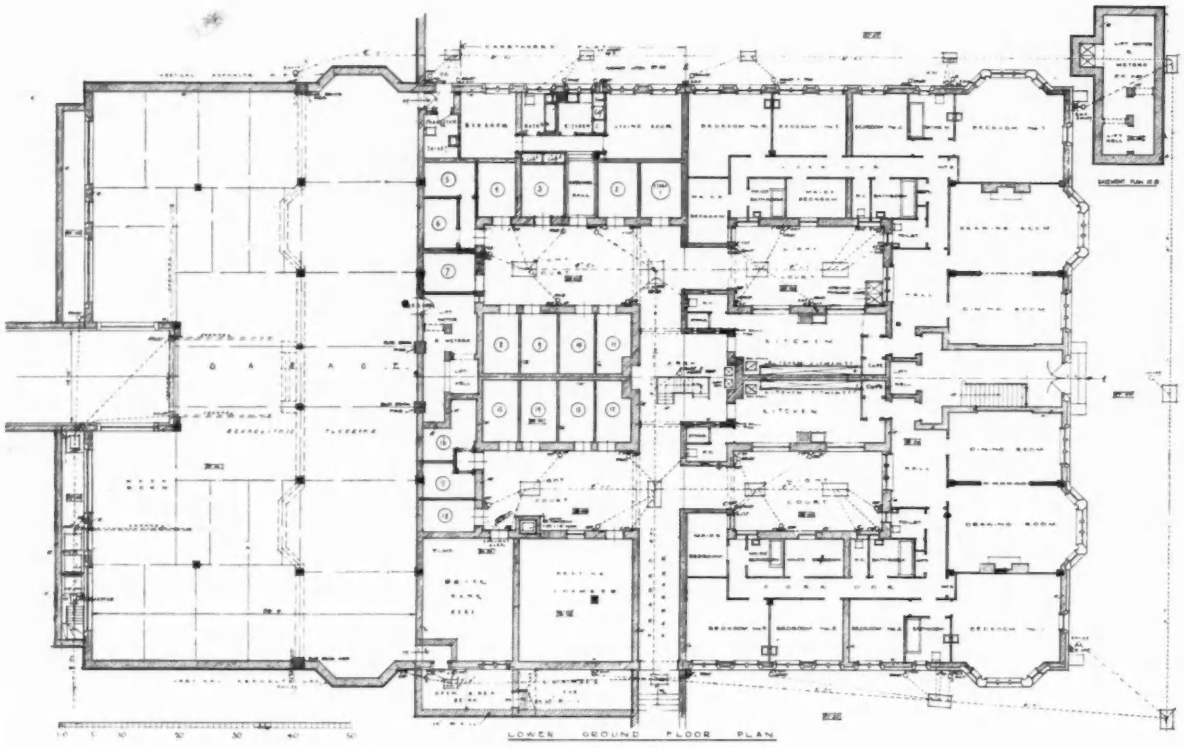
The accommodation of each of the twelve principal flats is as follows :

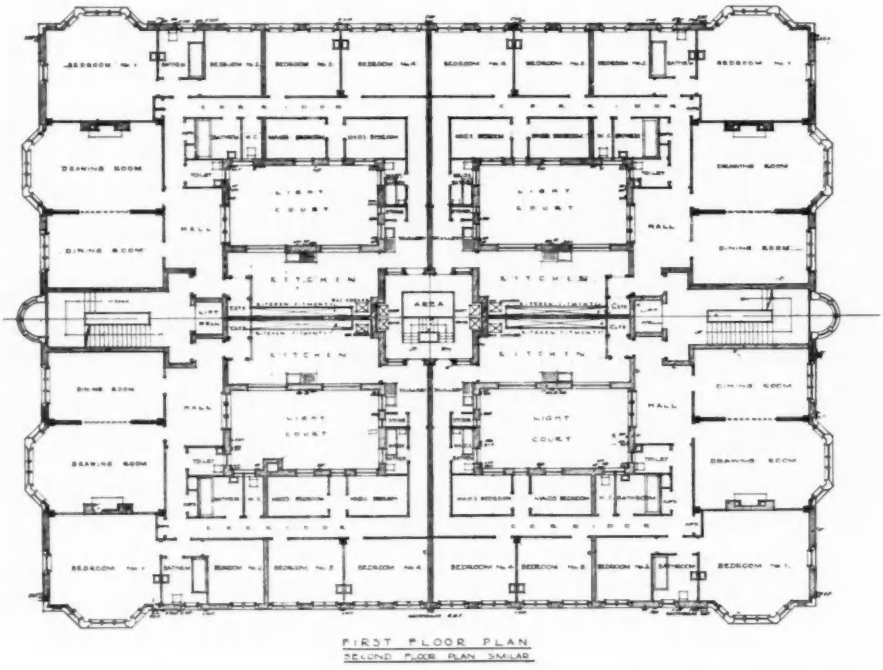
Vestibule, hall, drawing-room, dining-room, four bedrooms, two bathrooms, two w.c.s, two maids' bedrooms, maids' bathroom, maids' w.c., kitchen with refrigerator, scullery, store, larder.

One of the staircases, showing, in the centre of the landing, the lift doors, on either side of which is an entrance to a flat. All the staircases possess good natural lighting.

The kitchens are installed with the most modern fitments, including refrigerators. One end of each kitchen is connected through a lobby with the hall, the other with the scullery and servants' quarters.

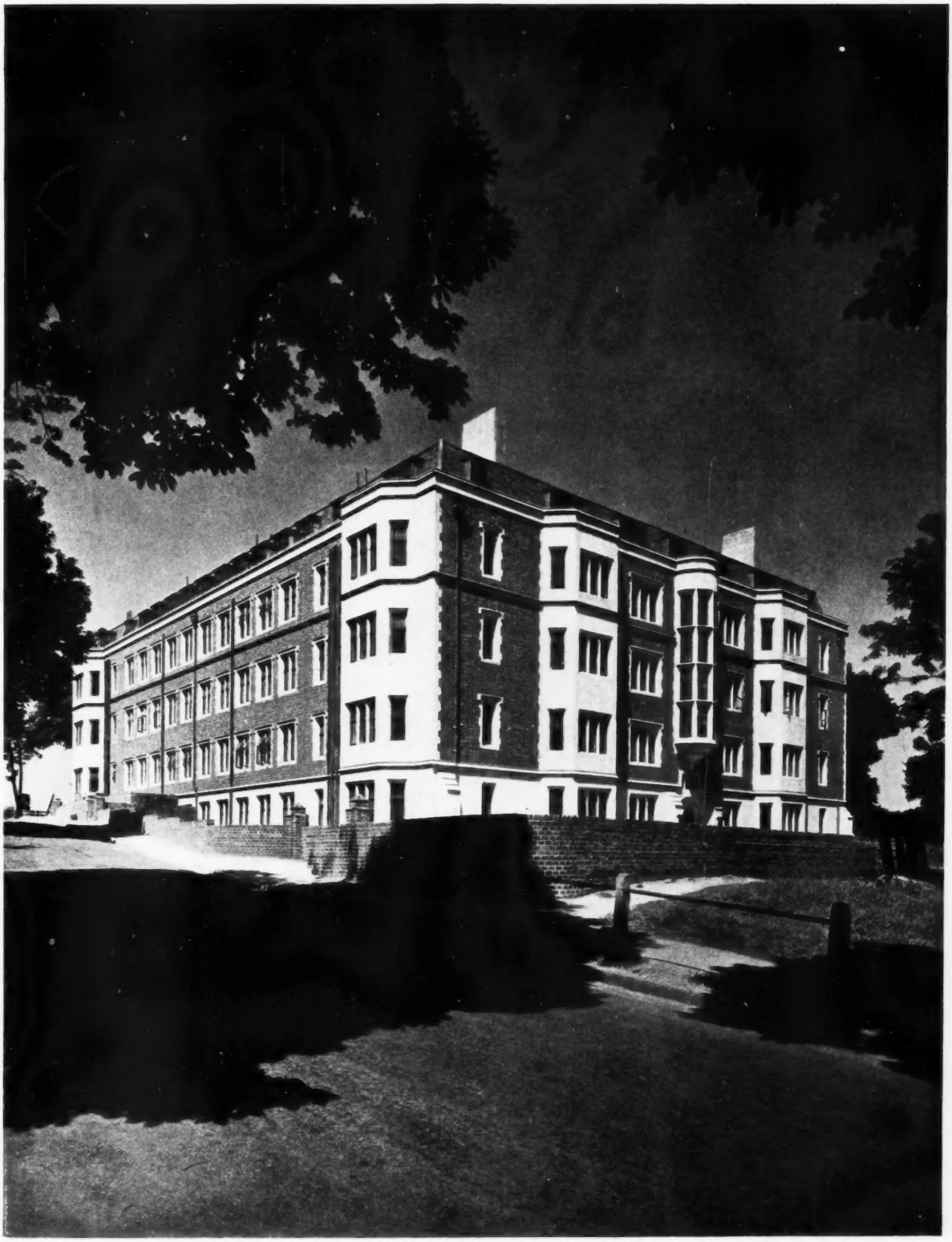






Plans of the lower ground, first and second floors. Among the important features of the lower ground floor is an open garage, about 100 ft. long by 60 ft. wide, for the accommodation of tenants' cars. This is provided with a wash-down and is approached by a sloping roadway in front of the forecourt to the main façade.

"Bellmoor," Hampstead Heath, N.W.] [*By Yates, Cook and Darbyshire*



"Bellmoor," Hampstead Heath, N.W.] [*By Yates, Cook and Darbyshire.*

A view taken from East Heath Road. On the other entrance front—which is of similar design—is the drive down to the garage.

THE SKETCH CLUB

THIRTY-THIRD SESSION

By Percy J. Westwood. (Soft Ground Etching : 5″ × 10½″)

No. 51 : Calle Della Madonna, Venice.

By Ruth Cobb. (Pencil : 9″ × 12″)

No. 192 : The Bridge, Aurey.

THIS session of the Sketch Club is devoted to reproductions of some of the architectural subjects at the eleventh exhibition of the Society of Graphic Art which opened on Wednesday last, July 8, at the Royal Institute Galleries, Piccadilly, W., under the presidency of Mr. Frank Brangwyn, R.A., R.E. The exhibits number 352, and include drawings in pencil, pencil and chalk, pen and ink, pen and wash, chalk and charcoal, colour prints, etchings, wood-engravings and aquatints. Mr. Percy J. Westwood shows six subjects, two of which are reproduced on this page, and has the honour of being the only architect represented at the exhibition. The collection will remain on view to the public until July 30.

By Percy J. Westwood. (Soft Ground Etching : 5″ × 10½″)

No. 30 : At Avignon.

By Herbert G. Hampton. (Pen and Wash : 11¼″ × 9½″)

No. 329 : York.

By W. Aloysius Johnson. (Pencil : 14″ × 9½″)

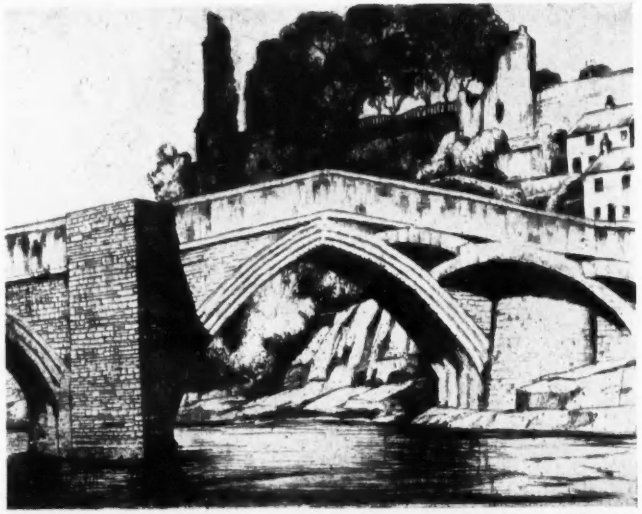
No. 199 : Low Tide at Boston.

By W. Aloysius Johnson. (Pencil : 11″ × 9″)

No. 6 : The Heart of Manchester.

By Hilda Cowham.
(Pencil : 6¾″ × 8½″)

No. 4 : Sospel, Alpes Maritimes.



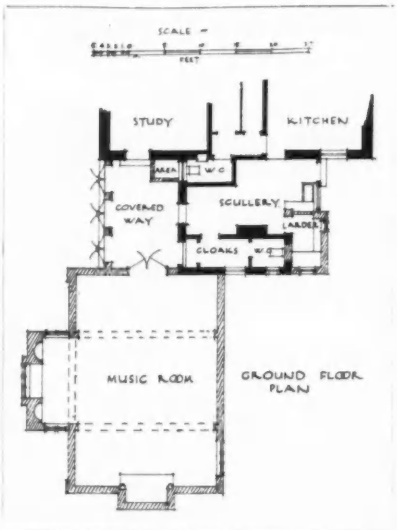
By Stanley Peck. (Etching : 8¾″ × 7″)

No. 138 : The Old Bridge, Barnard Castle.

MUSIC ROOM FOR A VICTORIAN HOUSE

DESIGNED BY JOHN D. CLARKE (JOHN D. CLARKE AND WORSFIELD)

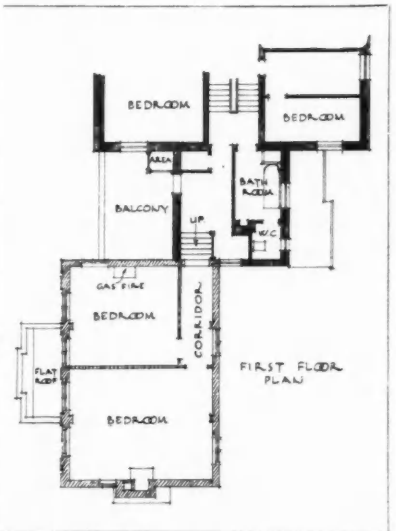
The addition, of brick and slate, showing the loggia, with glazed steel doors, connecting on the left with the existing Victorian house. This was a conspicuous specimen of the worst period of Victorian architecture—1860; speculative builder; domestic Gothic—complete with anæmic yellow brick and "Early English" stone dressings.



The music room is entered from the loggia by a pair of glazed doors, and contains a performers' niche.

THE owner of "Beckford," East Grinstead, Sussex, a great musician, required an addition consisting of a music room, with two bedrooms over, and the difficulty was to provide a room that would serve as a suitable environment and yet at the same time would not externally accentuate the existing poor design. An addition was built of 2-in. stock bricks, roofed with slate. This was connected to the house by a loggia, in which are three pairs of glazed steel doors, made to be lifted off their hinges and stored away in summer.

Good acoustics were essential, and were ensured by using on the walls and ceiling an ordinary lime plaster, finished with a wood float; the surface of the walls was broken by wood fluted pilasters; also there was a fairly large cove at the junction of walls and ceiling. A big square bay window, framed by pilasters and having two niches, forms a background for two or three musicians, after the nature of a small stage.



Above are planned two bedrooms and a short corridor connecting with the bedroom landing in the existing house.

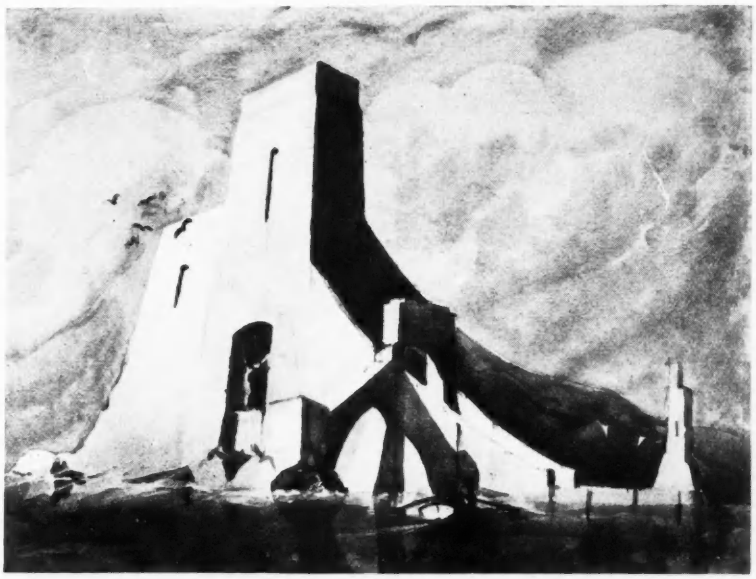
The music room, looking towards the fire-place; and the performers' niche. The walls, ceiling and woodwork are throughout of an indefinite warm brown-grey tint, save for a single note of vivid colour in the glazed entrance doors (not here shown; see plan), which are lacquered Chinese red.

SCHOOL WORK: LIVERPOOL

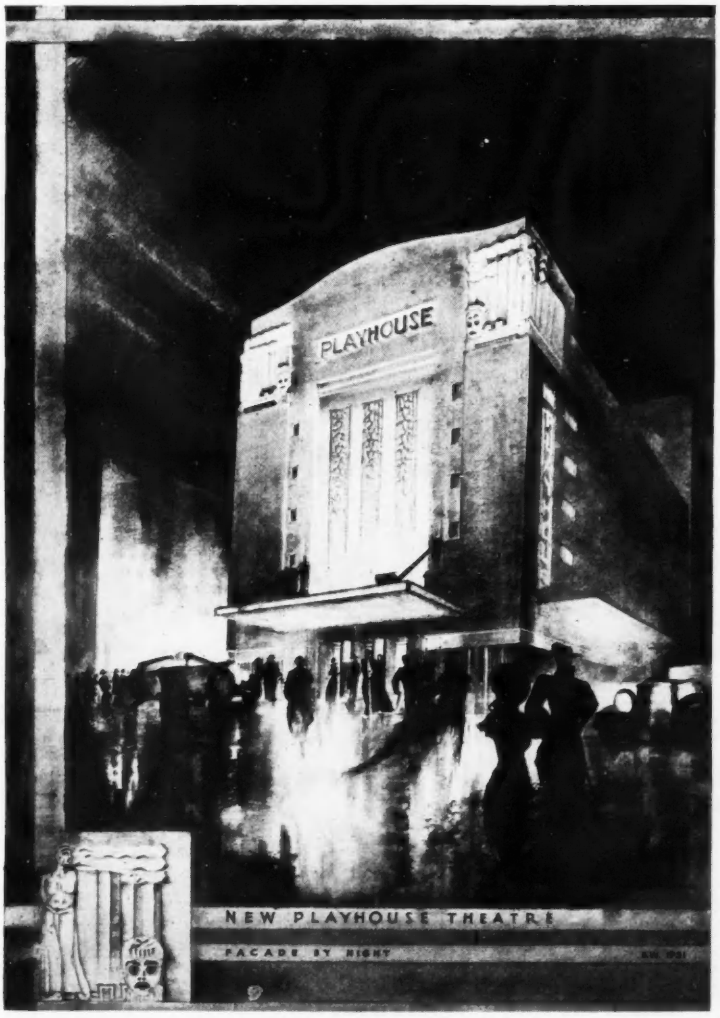
BY W. DOUGILL

THIS year the annual exhibition of drawings of the Liverpool School is housed in Bluecoat Chambers, one of the few remaining architectural gems of the district, and one is thus able to contemplate the effusions of youth in an atmosphere of sedate and artistic charm.

It might be of interest, first of all, to make a few generalizations. Throughout the year, the established policy of the School, evolved over a long term of years, has, in the main, been adhered to. One notices, however, evidence of minor innovations which only go to prove the dynamic character of the curriculum and show that the School is alive to new modes and new conditions as they arise.



A monument to sailors on the Brittany coast. Six-hours' sketch design by B. Allsopp.



A repertory theatre for Liverpool. Fifth-year thesis design by D. Winston: perspective view (for plan and section see following page).

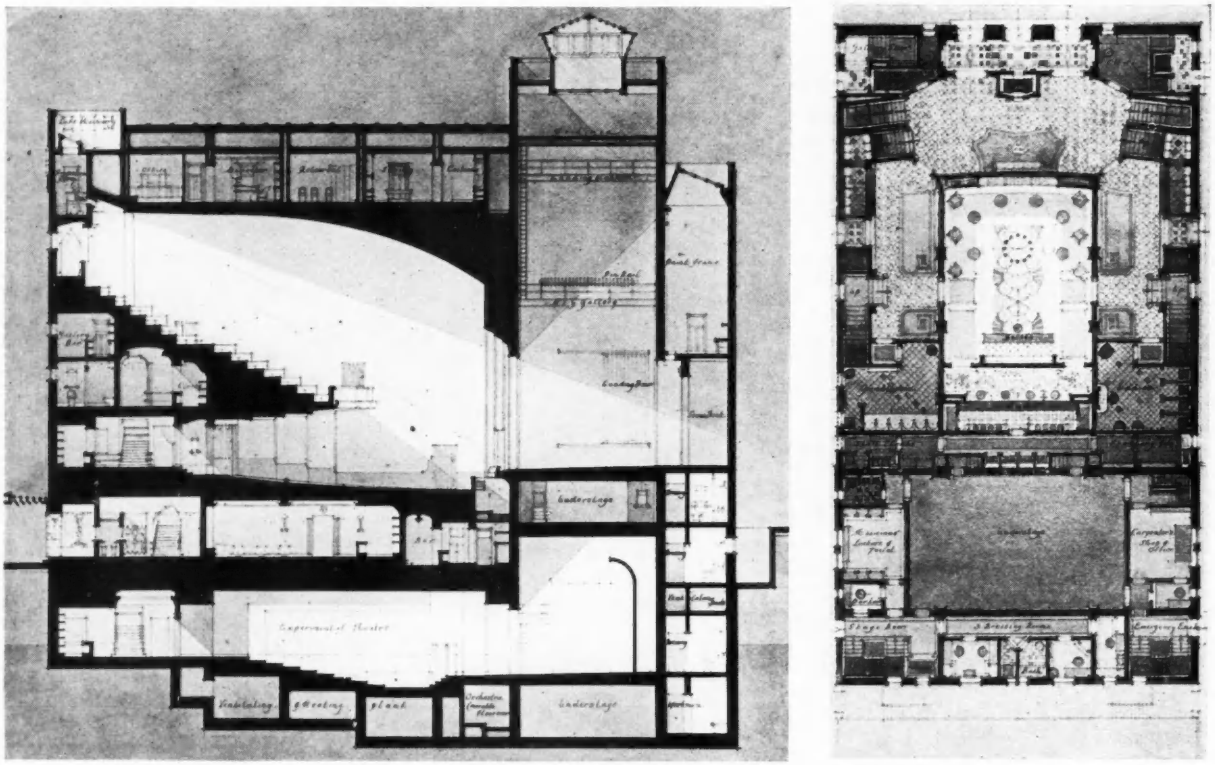
There is an abundance of evidence that so-called modernistic design is in the ascendant. This, as one feels it should be, is most conspicuous in the fourth- and fifth-year designs, which have been evolved after the students have received an adequate grounding in classical and traditional work.

Colour, as a definite branch of architecture, has received greater emphasis than in the past, and the effects of this are easily discernible in the work of all years.

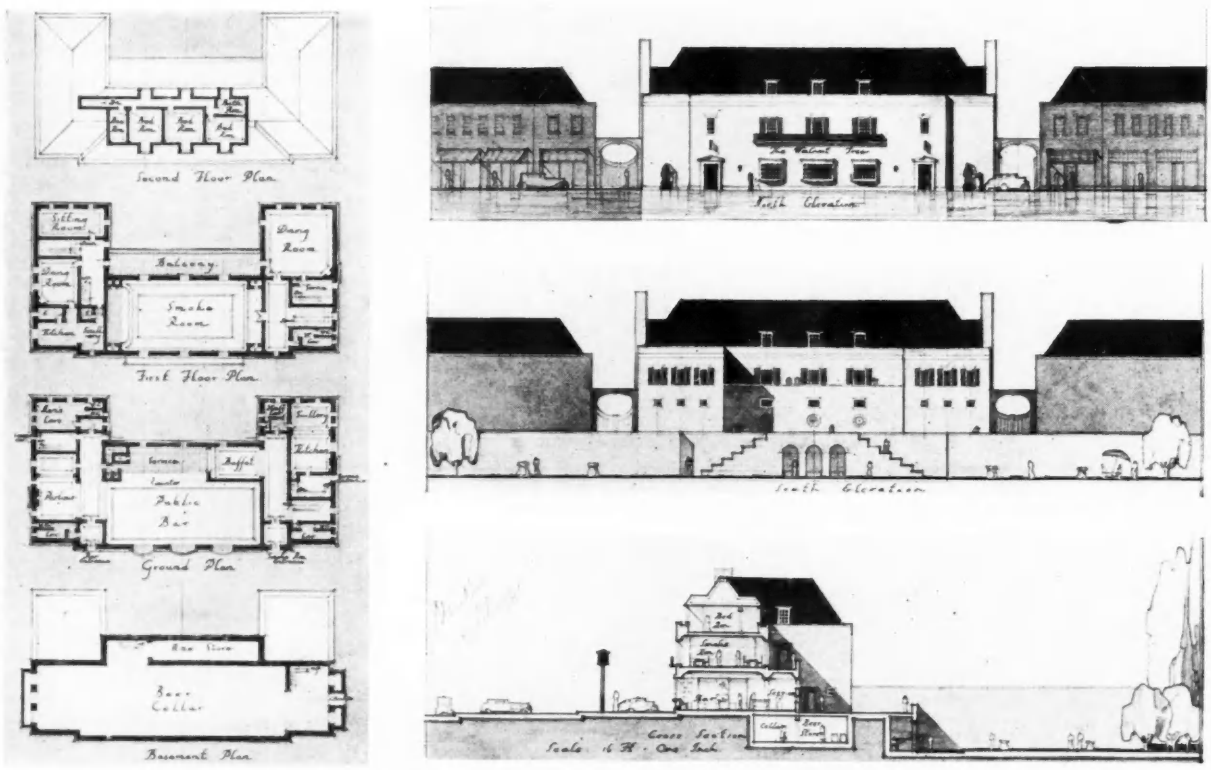
Finally, one notices a greater restraint in the rendering of finished projects, for which Indian ink holds a virtual monopoly. As a contrast to this, the more ephemeral designs are shown in a rich variety of presentation, with charcoal and colour predominating, according to the subject.

Though pride of place in the exhibition naturally falls to the fifth-year work, it will make this notice more comprehensible if we examine the work of the various years in order of seniority. It is only in this way that one can visualize the gradual crescendo of interest from the regularized work of the first year to the culminating work of the fifth.

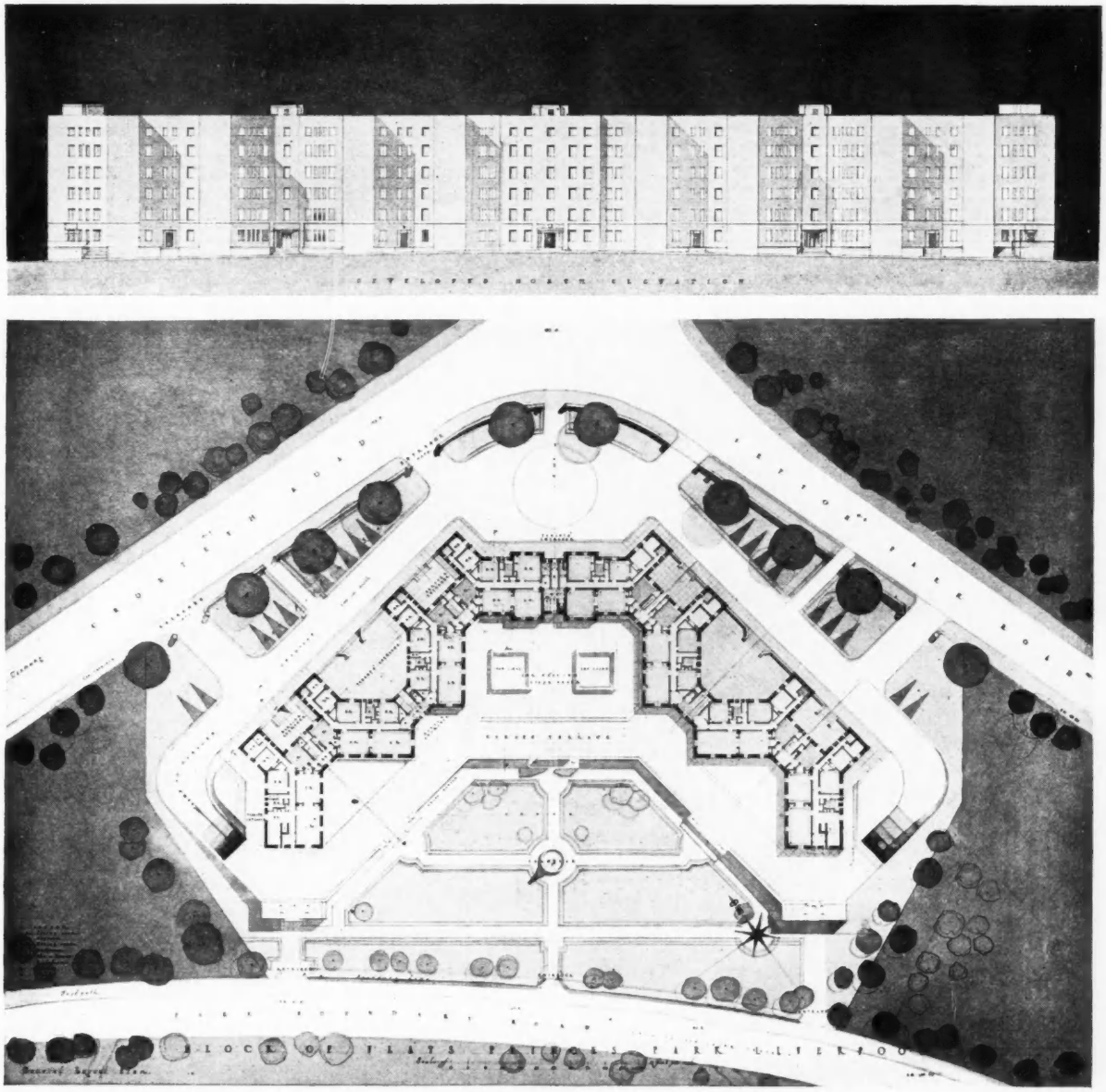
In the first year's work one notices diagrams dealing with the Elements of Form; large measured drawings of St. George's Hall, by which the students make acquaintance with the T and set squares, and receive a foretaste of the big schemes expected of them in the later years of the course; colour diagrams; construction sheets; and a series of small designs.



A repertory theatre for Liverpool. Fifth-year thesis design by D. Winston: longitudinal section; and entrance-floor plan (for perspective see preceding page).



A suburban inn. Third-year design by Glynn Roberts: plans; and north and south elevations, with cross section.



A block of flats facing Prince's Park, Liverpool. Fifth-year thesis design by E. J. Harrison: developed north elevation; and general layout plan.

Perhaps the most important scheme in the second year, shown by a number of delightful drawings, is a research subject in the form of an Italian Renaissance museum, in which the students had to apply motifs derived from buildings of the period. One believes that these drawings, and the research which is embodied in them, will have a healthy stabilizing influence on the later work of the students. The other designs include a market hall, and a small house, part of which is developed as working drawings.

In the third year, design predominates. Worthy of mention are a seaside café and bandstand, by E. Farrar; a sailors' church and institute, by B. Allsopp, a delightful effort at picturesque composition, the rendering of which gained for the author the Minoprio Prize for the best-rendered drawing of the third year; a suburban inn, by W. V. Reakes; and a design for the same building, by Glynn Roberts, shown by three drawings dramatically rendered in charcoal.

The work of the fourth year consists almost solely of designs of an ambitious character, each carried out in a relatively short time, and set with the object of testing the students' powers of imagination and facility of expression. One particularly notices R. S. P. Hubbard's layout for an electrical exhibition; a school of music, by A. Fidler; the layout of a pleasure island, by L. Berger; and a scheme for the layout of a headland, by G. P. Bell. An interesting model accompanies the latter design

It is from the productions of the fifth year that one obtains abundant evidence that the system of the School is more than justifying itself. Particularly is this so in the case of the final theses. Unlike the "commercial" programmes of the preceding years, the subjects for the theses are chosen by the individual students, who also select their own sites. The thesis is inevitably the supreme test, and gives a clear indication of the author's imagination and capabilities in design in all its aspects.

Exigencies of space will not allow o1 comments on each thesis, and therefore a few only are selected more or less at random.

E. A. Ferriby shows an exhibition building for Liverpool. The main building consists of a large hall and ancillary accommodation for major and minor exhibitions, together with two auditoria. The whole scheme shows competent handling of modern forms to suit a modern programme.

N. S. Lunn's scheme is a municipal office building over the new Mersey Tunnel entrance. Considerable ingenuity is displayed in the planning of this complex structure, in which the author has conceived the idea of lofty twin towers to give punctuation and emphasis to what will eventually be a focal point in the city.

R. J. Gardner Medwin submits a design for a planetarium and observatory. The drawings, which are beautifully rendered, are indicative of considerable research into the scientific aspects of the subject.

E. J. Harrison shows a block of flats for Liverpool. The plans are novel in form, and the whole conception is clean in development. An outstanding feature is the basement garage, made possible and practicable through the slope of the site.

D. Winston is represented by a design for a new playhouse at Liverpool. On a restricted site the author has provided all the accommodation necessary for a theatre of this type, including an experimental theatre at lower ground-floor level. The interior is treated in a quiet, attractive and appropriately intimate manner.

A. M. Best shows an ambitious scheme for a basilica at Lourdes; R. G. Parker, a crematorium; and O. Weerasinghe a university for Ceylon.

In addition to the foregoing design theses, mention is due of the colour thesis of J. Sheridan, and the construction theses, including that by M. Riad—a railway and bus station for Cairo; and F. J. M. Ormrod's covered tennis court, in which the author has exploited the use of "Lamella" construction for the pseudo dome over the court.

Interspersed among all the above-mentioned drawings, and also monopolizing the entrance hall, are the numerous six-hour sketch-designs executed by students in all years. These cover a wide range of subjects, and many of them show a remarkable facility for quick conception and appropriate—often dramatic—presentation.

Holiday sketches, models, a series of fifth-year designs other than theses, measured drawings, and a set of working drawings by each of the five years, complete the list of exhibits.

QUESTIONS THAT ARISE

Cubic Capacity of Public Institution

P. H. T. writes: "*Can you inform me as to the present cost per cubic foot of a fairly large workhouse or public institution? The scheme I have in mind would comprise a building for the inmates, an administrative block and boiler rooms, etc. I think it might be possible, however, to put an average value per cubic foot for the whole, including drains, paths, drives, boundary walls, etc.*"

Without further detailed information than that given it would be impossible to give an inclusive price per foot cube to cover the different types of buildings included in an institution of this sort, and without knowledge of the site it is also impossible to include for boundary walls and paths.

The administrative block would cost more than the pavilions or dormitories, while if these blocks were connected by corridors or covered ways, which were included in the calculation of the total cubic contents, this would affect the estimated price.

A rough indication of what these buildings would cost would be:

	Per foot cube
Administrative block....	2/0–2/6
Inmates' pavilions.....	1/9–2/0

An alternative method of arriving at the approximate cost of these buildings is according to the number of patients or inmates.

A guide as to the present-day prices, according to this method, would be about £700–£800 per inmate.

In each case these prices are exclusive of land and furnishings. J. W.

Plaster for Walls

A. B. writes: "*What plaster does your expert recommend where it is necessary to paint or distemper the walls immediately a building is completed? The contemplated building is a factory, and the inconvenience of carrying out internal decorations when once the machinery is installed will be readily understood. In some of the recent London stores I have noticed that there are no signs of the wall plaster being damp, and the colours are fast.*"

It is reasonably safe to do as your correspondent suggests upon plastering finished in Keene's cement on a Portland backing, provided that the brickwork beneath has been given an opportunity of drying out.

This might, however, prove an expensive finish for a factory, and a preferable alternative would be a reliable hydrated lime plaster, painted with an undercoat of one of the special paints having a tung-oil-resin basis, with any desired finish, or distempered in waterbound distemper using an earthy pigment not likely to discolour.

A further alternative even lower in cost and quite suitable for factory work would be to face internally in sand-lime bricks (unplastered) with flat struck joints distempered. The usual cause of blotchy paint and distempering on new work is saponification of the paint by the action of free lime from cement or plaster, liberated during hydration and setting. E. G.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Rural Housing

THE Government proposals in regard to rural housing were outlined by the Minister of Health, on the money resolution authorizing payments for the provision of houses for agricultural workers and others.

Mr. Greenwood said that in the rural district council areas since the war over 41,000 houses had been built. On the whole, it looked as if that was a good figure, but when one considered the number of houses which had been made available for rural workers it was clear that this figure did not carry them very far. A large number of houses in rural district council areas had been provided for the industrial population.

The pressure from the towns on the countryside had restricted the accommodation for the agricultural worker. Behind that there had been the difficulty of the customary wage of the agricultural worker, and the customary rent he had paid in the past. Of the 41,000 houses provided by rural district councils, only 15,000 had been built in purely agricultural parishes, and only a third of these were let to people in agricultural employment. Owing to their reduced resources, the rural district councils would be able to do very little more in housing unless they were given financial assistance.

The financial proposal was to provide £2,000,000 for the purpose. The money was to be allotted on the recommendations of an Advisory Committee, to be appointed by the Minister with the approval of the Treasury, which would consider applications from rural district councils. The houses were to be confined to agricultural parishes. The maximum cost of building a house was to be £350; and it was estimated that it could be let at a rent of 3s. a week, about half of which was to be set aside for the payment of capital charges and repairs. It was difficult to say how many houses would be provided under the scheme, but he thought the number would be about 40,000. The Committee would consider the poverty of the area and they would get away from the flat rate of grant. If the

local authority were able to make part of the contribution that it should make under the Act of 1924, and that was reasonable, it would be asked to make it. The more that could be done, the farther the capital sum involved would go.

In some cases where through sheer poverty the rate contribution was impossible, the whole of it would have to be met, and would be met. The local authority would go before the Committee with their schemes and proposals and the explanation of their poverty, and the Committee would make their recommendations on specific points, the number and type of houses in respect of which special assistance should be given, the date by which the houses were to be completed, the rent at which the houses were to be let, and the amount of the special grant which was to be given. If the estimated product of a penny rate for the present financial year did not exceed 5d. a head of the population and the poundage of the general rates levied for the year 1930 exceeded 10s., they seemed to have reasonable conditions establishing a level of real property. So far as he could tell, out of about 650 rural district council areas in England and Wales the test would include between 300 and 400. It would include all the truly agricultural areas of the country which could be described as really poor. Many authorities had built next to no houses, and some in Scotland had not built any. Where local authorities could not build houses, and where the country would not, there should be, in reserve, the power of the State to step in and make arrangements for the building of the houses. After debate, the resolution was agreed to.

Architects (Registration) Bill

Late on the evening of Thursday, July 9, the House of Commons considered and agreed to the Lords' amendments to the Architects (Registration) Bill.

Housing by Direct Labour

Mr. Day asked the Minister of Health whether he could state the number of local authorities in England and Wales who were at present erecting houses by direct labour; and the number of houses which had been altogether erected by direct labour during the twelve months ended to the last convenient date.

Mr. Greenwood said that, at the latest available date, 118 local authorities were erecting houses by direct labour, and during the twelve months ended March 31 last 5,248 houses were erected by this means.

Timber and Joinery

Commander Bellairs asked the Minister of Health whether he was satisfied that local authorities were acting in conformity with Circular No. 569 of March 24, 1925, which recommended that when there was no alternative to purchasing material from abroad the local authorities should keep in mind preference for goods and materials of Imperial origin; and whether this had been or was being done in connection with timber and joinery used in housing schemes.

Mr. Greenwood said he had no reason to believe that local authorities generally were not acting in conformity with the advice which had been given to them on this subject.

LITERATURE

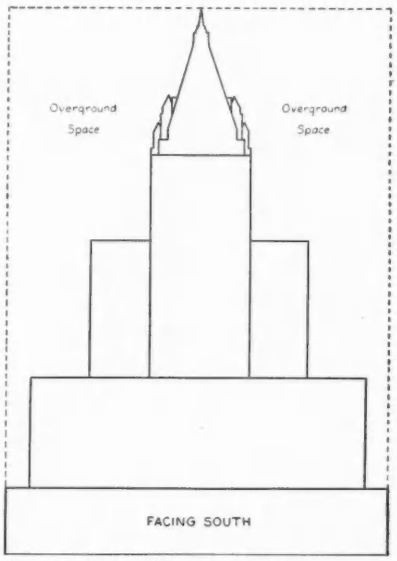
THE NEW YORK REGIONAL SURVEY

THE sixth volume of the New York Regional Survey contains a mass of information of the very first importance to all those concerned with town planning. It is impossible to deal with more than a few of its salient features, but some of these have such a direct relationship to the proposals for the revision of London's building regulations, now under consideration by the L.C.C., that it is absolutely necessary to deal with them to the exclusion of many other features in the book of which the purport bears less immediately on our own problems.

The main factor affecting the future of London is the relationship between possible building masses and the traffic facilities available. In New York, this problem has reached a more advanced stage, with the result that the conclusions that have been reached there are of the greatest value to us. It is, perhaps, not sufficiently recognized that, as regards area, New York is less intensively built up than the central area of London. At the southern end of Manhattan less than half the area is occupied by buildings, and in the central part only about 60 per cent., while the skyscrapers which loom so large in the public mind are less in bulk than would be a single story added to all the buildings in New York.

The regular street plan of New York renders traffic organization easier there, and yet in some districts the congestion is acute. Numberless proposals for duplicating and triplicating traffic routes have been made, but this investigation shows that these are relatively uneconomic, compared with the alternative of regulating building masses, and making better provision for lateral expansion. The position is forcibly put in a quotation from Albert E. Siebert: "At present we are not making progress, but are sliding backward. Every fifty-story building erected means so many more persons on our overcrowded sidewalks and crosswalks, and so many more vehicles on our nearly impassable streets, and also means a definite increase in the intolerable congestion of our subways. It is not possible to build subways fast enough to keep pace with such insane building."

A recent study of land and building costs and revenue affirmed that in a central site in New York the economic height was sixty-three stories, but the land value taken was a very high one, to some extent dictated by the fact that a number of properties must be acquired to provide an area suitable for the design of a high building, in accordance with the zoning regulations. In Chicago, a city more comparable topographically with London, a similar study resulted in a decision in favour of fifteen stories. After a review of such studies the conclusion is reached that the limitation of bulk is of greater importance than the limitation of height in itself. It is thought that it is probably impossible for any large city to control building bulk and uses to an extent that will obviate all congestion during the peak traffic periods, but they become excessive if the peak periods are unduly lengthened owing to delay. Mr. F. K. Stevens is quoted as saying: "I think there is a danger that if the developers continue they will kill the goose that lays the golden egg. In other words, we will crowd so many people into a district that the section will not be able properly to conduct its business."



[*From* Buildings: Their Uses and Spaces about Them.]

Section of the New York Life Insurance Building, illustrating "overground" space.

[*From* Buildings: Their Uses and Spaces About Them. *By courtesy of the* Architectural Record.
Block after block closely built over with four- and five-story tenements in New York. The lofty new apartment districts can be seen in the vicinity of Central Park.

The solution is considered to be that regulations should not prohibit height, but should insist that height shall be related to space on the ground. Proportion and scale between vertical and horizontal dimensions would then be preserved, not merely for the eye, but also to ensure health, safety, economy, and comfortable circulation. Thus, zoning should do much more than regulate distribution of bulks and spaces on lots, blocks and small districts. It should determine the location and proper degree of spaciousness, as well as the reasonable concentration of working and living districts over large areas. It should be an essential part also of any method of dealing with transport improvements.

Another point mentioned in the comparison of London with New York is that the altitude of the sun shows a difference of nearly 11° in favour of the latter city. It is not practicable to review the variations in practice thereby demanded, nor to touch on the extended studies of housing conditions and the review of zoning procedure included in the latter part of this work; it must suffice to add that it would well deserve summarizing as a handbook for those interested in the future of our great cities. H. V. LANCHESTER

Buildings: Their Uses and Spaces About Them. By Thomas Adams, Wayne D. Heydecker and Edward M. Bassett; 1931. Committee on Regional Plan of New York. Price $3.

AN ARCHITECTURAL ESCAPADE

WHAT fun it all is, this three-dimensional scene-painting of Mr. Clough Williams-Ellis's on his Welsh peninsula! What a sedately gay, friendly fantastic comedy one is invited to look upon by means of the one shilling entrance ticket, if one may so describe the little green brochure *Portmeirion Explained. Essays by Several Hands*, edited by Mr. Noel Carrington. Better still, no doubt, to be an actor on that stage, even though "an Authority," in the essay on "Bald Facts," hints at such occasional adversities as "rain for twenty-four hours at a stretch."

This little green book is a delight, with the illustrations from *Country Life* photographs setting lovely scenes for any amount of imagined pretty comedies or romantic drama. Mr. Williams-Ellis, the actor-manager, or "owner-developer," sets forth the story of his enterprise in half a dozen pages, while Mr. A. C. Limber describes "What to do and What to See," when the "very distinct tendency to do nothing whatsoever," which the atmosphere of this materialized dream-place induces, has been sufficiently indulged.

The cue to outside critics and other supers in the comedy is given by Mr. Christopher Hussey in a note reprinted from *Country Life*: "Portmeirion might easily have been an architectural horror. . . . Actually . . . with all its . . . joyous freakishness, Portmeirion is essentially of the soil, and every part bears the authentic touch of the artist." He pleads for something of the same happy touch in some of our larger watering-places.

V. M. C.

Portmeirion Explained. Essays by Several Hands. Edited by Noel Carrington. Birmingham: Kynoch Press. Price 1s. net.

Publications Received

Spanish Colonial or Adobe Architecture of California. By Donald R. Hannaford and Revel Edwards. New York: Architectural Book Publishing Co., Ltd. $7.50.

Principles of City Planning. By K. B. Lohmann. McGraw-Hill Publishing Co., Ltd. Price 20s. net.

Architectural Practice and Procedure. By Hamilton H. Turner. London: B. T. Batsford, Ltd. Price 2s. 6d. net.

Table and Memoranda for Plumbers. By J. W. Clarke. London: B. T. Batsford, Ltd. Price 2s. 6d. net.

Modern Dutch Buildings. By F. R. Yerbury. London: Ernest Benn, Ltd. Price 32s. 6d. net.

The Quarterly of the Department of Antiques in Palestine. London: Oxford University Press. Price 18s. 6d. net.

Empire Marketing Board, May, 1930, to May, 1931. London: H.M. Stationery Office. Price 1s. net.

SOCIETIES AND INSTITUTIONS

CONFERENCE AT THE R.I.B.A.

ON Saturday, June 27, the Board of Architectural Education held a conference with representatives of all the schools of art and technical colleges throughout the country which offer facilities for the instruction of intending architects. Mr. Thomas E. Scott, F.R.I.B.A., headmaster of the Department of Architecture, Building and Surveying, of the Northern Polytechnic, London, read a paper on "Some Problems connected with the training of Architectural Students in Schools of Art and Technical Colleges." A discussion followed on the subject of the paper and on points of general interest. The chair was taken by Mr. L. Sylvester Sullivan, then chairman of the Board of Architectural Education. At the conclusion of the meeting the members of the conference inspected the exhibition of drawings submitted in the final competition for the Rome Scholarship in Architecture, 1931, and a special exhibition of drawings executed by evening school students.

R.I.B.A. EXAMINATIONS

The R.I.B.A. Statutory Examination for the office of District Surveyor under the London Building Acts, and the Examination for the office of Building Surveyor under Local Authorities, will be held at the R.I.B.A., London, on October 14, 15 and 16, 1931. The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is September 23. Full particulars of the examinations and applications forms can be obtained from the Secretary, R.I.B.A.

STUDENTS' EVENING AT THE R.I.B.A.

On Tuesday, June 23, a students' evening was held in connection with the R.I.B.A. Exhibition of Architects' Working Drawings. There was a good attendance of students, and they spent a considerable time inspecting the exhibition, which included drawings lent by Messrs. C. Cowles-Voysey, F.R.I.B.A. (Corporation of Hastings, offices at the White Rock Approach; Kingsley Hall, Bow); W. Curtis Green, A.R.A., F.R.I.B.A. (Stockgrove Park); L. Sylvester Sullivan, F.R.I.B.A. (office building at 37–39 Lime Street, London); and Maurice E. Webb, D.S.O., M.C., F.R.I.B.A. (Commercial Union new head office, Cornhill; Sebright's Endowed School, Worcestershire). Messrs. L. Sylvester Sullivan, H. A. Dawson (representing Mr. Maurice E. Webb), John Dower (representing Mr. C. Cowles-Voysey) and Christopher Green (representing Mr. W. Curtis Green) explained to the students the special points of interest in their respective drawings.

THE OWEN JONES STUDENTSHIP

The last day for the receipt of applications for admission to the competition for the Owen Jones Studentship has been extended from July 1 to August 31, 1931.

SMALL HOUSE COMPETITION

The President of the Royal Institute of British Architects has nominated Mr. John Watson, A.R.S.A., F.R.I.B.A., President of the Royal Incorporation of Architects in Scotland, as assessor in the competition for a design for a small house promoted by Associated Newspapers, Ltd., in connection with the "Scottish Ideal Home Exhibition."

CROYDON ARCHITECTS

Coun. Major F. W. Rees and Mr. A. H. Barnes have been elected members of the Science Standing Committee of the R.I.B.A.

Mr. W. H. Ansell has been elected chairman of the Board of Architectural Education.

ARCHITECTS' SKETCHING TOUR

The members of the Essex, Cambs. and Herts. Society of Architects have just returned from a sketching tour in the district of Bruges, which has been most successfully carried through under the leadership of the chairman of the West Essex Chapter, Mr. T. H. B. Scott, F.R.I.B.A. The party visited several places of interest, including the housing scheme at Le Zout, Ghent, Antwerp and Brussels.

LIVERPOOL SCHOOL OF ARCHITECTURE

Prizes and Scholarships—Session 1930–31

Open Scholarships

R.I.B.A. Victory Scholarship: B. B. Lewis.

R.I.B.A. Victory Scholarship, honorary mention: Miss Hilary Archer.

Archibald Dawnay R.I.B.A. Scholarship in Construction, third year: A. Roberts.

Archibald Dawnay R.I.B.A. Scholarship in Construction, fourth year: F. J. M. Ormrod.

Honan Travelling Scholarship of the L.A.S.: L. Berger.

School Scholarships

Lord Waring Travelling Scholarship in Decoration (all years): J. G. R. Sheridan.

Holt Travelling Scholarship, third year: G. Roberts.

Ravenhead Travelling Scholarship, second year: L. H. Burnett.

Holland, Hannen and Cubitt's Prizes for Working Drawings, fourth year: A. G. S. Fidler.

Holland, Hannen and Cubitt's Prizes for Working Drawings, third year: A. E. Rice.

Holland, Hannen and Cubitt's Prizes for Working Drawings, second year: G. C. Timmis.

John Rankin Prize for Sketch Designs, fourth year: A. P. S. Hubbard.

John Rankin Prize for Sketch Designs, third year: J. B. Alcock, H. B. Allsopp.

Gordon Selfridge Prize for Design, second year: M. G. Gilling.

John Lewis Prize for Furniture Design, fourth year: A. G. S. Fidler, A. P. S. Hubbard.

Anthony Minoprio Prize for Rendering: H. B. Allsopp.

Berry Webber Prize, first year: B. T. Howells.

Examination Lists—Session 1930–31

Faculty of Arts: Diploma in Architecture

FIFTH EXAMINATION

(*Exemption from Final Examination for A.R.I.B.A.*)

Distinction in Architectural Design

Banister, H. — Parker, R. G.

Distinction in Architectural Construction

Ormrod, F. J. M.

Ordinary Diploma

Fairhurst, R. F. — Richardson, Rachel J.
Furbur, E. R. — Sheridan, J. G. R.
Hewitson, T. T. — Stirrup, G.
Kelly, R. H. — Weerasinghe, O.

FOURTH EXAMINATION

Distinction in Design

Beckett, S. H. — Parkinson, J. L.
Bennett, A. C. — Peace, F. N.
Berger, L. — Plews, C. E.
Crighton, A. — Rennie, H. G.
D'Alwis, H. T. S. — Richardson, Rachel J.
Davies, T. E. — Rogers, V. W.
Hernandez, L. M. — Sheridan, J. G. R.
Lazarus, J. — Sydney, P. A.
MacIntosh, Jean — Wyatt, H.
Mayo, Mary I.

Distinction in Construction

Roberts, A.

Ordinary Diploma

Smith, H. B. K.

THIRD EXAMINATION

(*Exemption from Intermediate R.I.B.A.*)

Baxter, J. R. — Hay, Sir A. T. E., Bt.
Beard, R. W. — Kidd, J. W.
Bradley Barker, R. B. — Miles, E. G. R.
Cousins, W. E. — Reakes, W. V.
Dixon, G. W. — Roberts, G.
Douglas-Jones, A. — Seddon, B.
Elfving, C. D. — Twemlow, W. J.
Farrar, E. — Vincent, H. J.

SECOND EXAMINATION

Bolton, T. P. — Gilling, M. G.
Bott, Doris M. — Hartley, R.
Bull, H. W. — Macdonald, A. E.
Bullen, A. — Montgomery, F. G.
Clokey, T. — Peters, B.
Coulthard, R. S. — Refern, B. E.
Cummings, K. — Roberts, A. H.
Dufty, A. R. — Timmis, G. C.

FIRST EXAMINATION

Bateman, Winifred H. — Jones, R. D.
Burchardt, Christiana R. — Kingdon, W.
Moir, B. L.
Challis, H. E. — Ransom, G. F.
Francis, A. E. — Riley, J. E.
Green, E. A. — Roy, A.
Griffiths, F. W. — Spruell, D. W.
Head, Katerina E. M. G. — Thompson, Elizabeth
Turner, Grace M.
Heaton, J. — Vasquez, F.

Faculty of Arts: Degree of B.Arch.

FIFTH EXAMINATION

(*Exemption from Final Examination for A.R.I.B.A.*)

Honours in Architectural Design

Class I

Ferriby, E. A. — Lunn, N. S.
Gardner Medwin, R. J. — Winston, D.

Class II

Best, A. M. — Nelson, J. O.
Harrison, E. J. — Worsnip, J. V.

Honours in Architectural Construction

Class I
Riad, M.

Ordinary Degree

Goodacre, N. W.
Miles, Marjorie
Mitchell, T. N.

Ordinary Degree (Old Regulations)
Lewis, G. S.

FOURTH EXAMINATION

Honours Design

Bell, G. P.
Best, A. M.
Blair, W.
Ferriby, E. A.
Fidler, A. G. S.
Gardner-Medwin, R. J.
Gonsal, H. E.
Goodacre, N. W.
Hope, A. H.
Horsburgh, E. R.
Hubbard, R. P. S.
Lake, H. J.
Littler, F. H.
Lunn, N. S.
Naudé, D. F. H.
Rathmell, M.
Smith, R. V.
Stammers, Constance S.
Winston, D.

Honours Construction

Coates, U. A.
Gearey, K. W.
Jones, D. M.
Meiring, A. L.
Riad, M.
Roberts, R. E.

Ordinary Degree

el Hakeem, M. M.
Wilkinson, J. G.

THIRD EXAMINATION

(*Exemption from Intermediate R.I.B.A.*)

Alcock, J. P.
Alleyn, J. H.
Allsopp, H. B.
Berwick, Kathleen, R. H.
Brown, J. H.
Coutts, G. A.
Cowin, D. M.
Dowling, R. H.
Edgar, J. C.
Fletcher, Rosemary S.
Gharbo, O. M.
Goulding, G. E.
Griffith, W. A.
Holden, G. T.
Jensen, R. A.
Martinez, A. G.
Mason, G. R.
Norcliffe, H.
Rice, A. E.
Robson, H. S.
Ross, I. P.
Yuen, T. C.

SECOND EXAMINATION

Bingham - Powell, C. H.
Burnett, L. H.
Dodd, D. M.
Hinchcliffe, Kathleen M.
Thearle, L. B.
Williams, A. L.

FIRST EXAMINATION

Charles, F. W.
Charlton, P. R.
Elliott, J. I.
Gordon, H. I.
Grant, D. A.
Greenwood, S.
Hardy, R.
Hirst, P. E. D.
Hopkinson, G.
Howells, B. T.
Kirby, Joan
Marshall, S. A. W. J.
Mills, D. H.
Newton, A. T.

ROYAL BRITISH SCULPTORS

The Royal Society of British Sculptors have awarded their silver medal "for the best work of the year by a British Sculptor in any way exhibited to the Public in London" to Mr. Gilbert Bayes, V-P.R.B.S., for his frieze "Drama through the Ages," on the Saville Theatre, Shaftesbury Avenue, W.C.

THE INSTITUTE OF LANDSCAPE ARCHITECTS

Mr. Edward White has been elected the new President of the Institute of Landscape Architects.

INSTITUTION OF SANITARY ENGINEERS

The summer meeting of the Institution of Sanitary Engineers was held on Thursday and Friday, June 25 and 26. An inspection of the Ford Motor Company's works at Dagenham was made on Thursday and the general meeting was held at the Holborn Restaurant on Friday evening, followed by dinner and a dance. Members of the Institution of Municipal and County Engineers (Eastern District) and the Chartered Surveyors' Institution (Essex Branch) also attended the visit to Dagenham.

HIGHER BUILDING EDUCATION

The announcement which appears on an advertisement page in this issue concerning the establishment of a degree course in building in the University of Manchester is of importance. It is interesting to observe the extent to which the educational facilities for building students have developed during recent years. The original system has been almost entirely replaced by the arrangement of (a) general courses, which provide for those requiring instruction in the work of the industry as a whole; and (b) trade courses, suitable for apprentices requiring technical training in their own particular craft. A further stage in the development was reached last year when there was introduced the scheme of National certificates and diplomas in building, instituted by the Institute of Builders in conjunction with the Board of Education.

The degree course in building technology in the Manchester University will cover a period of three years, and will lead to the degree of Bachelor of Technical Science. It will provide a comprehensive training in building science and construction, and, in addition to fundamental subjects such as mathematics, mechanics, chemistry and physics, it includes building construction, builders' quantities, structural and reinforced concrete design, surveying and levelling, builders' estimates, accountancy and costing.

LAW REPORT

ALLEGED PARTNERSHIP WITH LANDOWNER : BUILDER'S ACTION

Cooper v. *Pilkington. Chancery Division. Before Lord Justice Romer*

THIS was an action by Mr. John Cooper, a master builder, of Quarry Wood, East Grinstead, against Mr. John Pilkington and Mr. H. E. Pilkington, trading as farmers, of Owletts Farm, Ashurst Wood, East Grinstead, seeking to establish a partnership between plaintiff and defendants in certain building operations.

The defendants denied that any partnership existed, as alleged.

Mr. E. G. Palmer appeared for the plaintiff and Mr. Robert Fortune for the defendants.

His lordship, after hearing the evidence, gave judgment. He said in this case plaintiff was seeking to establish between himself and the defendant firm a partnership in connection with the building of certain bungalows that took place in 1927 and 1928 on land the property of the defendants. This was unfortunate litigation because his lordship could not help thinking that the whole matter was due to a misapprehension in the mind of the plaintiff and his wife as to the effect of what was said at a certain interview that took place between plaintiff and Mr. Henry Pilkington, at which Mrs. Cooper said she was present, but at which interview, according to Mr. Pilkington, she was not present. His lordship thought that it was more probable that she was present at the interview, having regard to the version she had given in the witness box. He should therefore assume that she was present.

It appeared that in 1927 Mr. Cooper was a master builder, and he had done a certain amount of work for the defendant firm in connection with their farm. Then the plaintiff mentioned to Mr. Henry Pilkington that he would like to build a house for himself upon a portion of Owletts Farm. They went down to Quarry Wood and to a certain spot where there was a convenient frontage to the high road, and it was common ground that on that occasion the plot of land in the north-east corner was selected.

He accepted the evidence of Mr. Pilkington that at that time the plot of land was not staked out, but was definitely agreed upon between him and the plaintiff. It had a depth of 200 ft. Mr. Pilkington wanted £50 for it. Plaintiff was not willing to give more than £25, and ultimately £25 was agreed upon as the price.

Thereupon Mr. Cooper began to build his bungalow on the plot and he cleared enough space on the plot obviously with the intention of building a second bungalow there. Mr. Pilkington was not willing that two bungalows should be built on it. According to Mr. Pilkington, thereupon it was agreed that another bungalow should be built on some adjoining land.

It was in connection with the second bungalow that the dispute between the parties had arisen. It was agreed that the actual building of the bungalow should be entrusted to the plaintiff. It was to be built partly from material obtained from some old cottages. Plaintiff's case was that the bungalow should be built by him in partnership with the defendant firm. This the defendants denied. Before referring to the evidence his lordship wished to say that in order to establish a partnership, the terms of the partnership must be definitely proved. Further, that the defendant was to share profits was

prima facie evidence of a partnership, but was by no means conclusive. According to the plaintiff he was to have £3 10s. a week and a share of the profits, and in this he was corroborated by his wife. It was said by Mr. Henry Pilkington that what was settled was this: that plaintiff should build the bungalow and that when it was sold he was to get not only £3 10s. a week but a share in the profits. The two accounts agreed exactly, except that according to Mr. H. Pilkington the profit to be divided was to be contingent on the house being sold. The court had to look at what took place afterwards, to see whether the parties treated themselves as partners. Here Mrs. Cooper got out figures as to the bungalow and showed that a balance was due to the plaintiff. If there had been a partnership it was inconceivable to his lordship's mind that the parties should have settled the small balance like that instead of waiting to see what the profit would be, if and when ascertained. To settle the balance as was done was more consistent with the employment of a contractor. So far as it was on the plaintiff to discharge the onus that was upon him of proving a partnership in the building of the bungalow, he had failed to do so. There was no single document in existence which even suggested it. Defendants denied that plaintiff was ever a partner, and he came to the conclusion that the plaintiff had failed in establishing a partnership.

Plaintiff also alleged that there was a partnership in relation to other bungalows on land of the defendants'. But there was no suggestion that there was a contract for a partnership entered into between them, except in relation to the second bungalow. His lordship unhesitatingly came to the conclusion that the plaintiff had failed to establish the onus laid upon him. The action must be dismissed, and defendants must pay the costs of the action and counterclaim.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Harehills Lane Baptist Church, Leeds (pages 71–74). General contractors, Armitage and Hodgson, Ltd. Sub-contractors : Edgar Fitton & Co., heating; Woodhead Partners, electric lighting; Hollis Bros. & Co., Ltd., wood-block flooring; J. and H. Patteson, Ltd., marble and mosaic work; The Kingsmill Metal Co., wrought ironwork and bronze memorial panels; C. E. Welstead, Ltd., metal windows; Chas. E. Steel, lead glazing; Wood, Wordsworth & Co., organ; G. H. and S. Keen, carved oak communion chair; Geo. M. Hammer & Co., Ltd., oak chairs.

"Bell Moor," The Heath, Hampstead (pages 79–81). General contractors, F. G. Minter, Ltd., who were also responsible for the joinery. Sub-contractors : Ragusa Asphalte Paving Co., Ltd., asphalt; Bath and Portland Stone Firms, stone; Smith, Walker, Ltd., structural steel; "Vita" Glass Marketing Board, glass; Cashmore Art Workers, ornamental lamps; H. and A. Booth, Ltd., central heating; Berkeley Electrical Engineering Co., Ltd., electrical installation; Woodfyt Sales, Ltd., electric light fixtures on main staircases; Matthew Hall & Co., Ltd., plumbing; Shanks, Ltd., sanitary fittings; Nettlefold and Sons, Ltd., door furniture; Williams and Williams, Ltd., casements; S. W. Farmer and Son, Ltd., iron staircases; Carter & Co., Ltd., tiling and patent flooring; Hammond Bros. and Champness, Ltd., lifts ; Kelvinator, Ltd., refrigerators ; G. F. Sharp, craftex decorations.

Beckford, East Grinstead, additions (page 84). General contractors, A. W. King and Sons. Sub-contractors : Wood, Russell & Co., Ltd., Sentry boilers.

ANNOUNCEMENTS

Messrs. Wigglesworth and Marshall-Mackenzie, FF.R.I.B.A., have removed their office to 52 Seymour Street, Portman Square, London, W.1. Telephone No. : Ambassador 1157.

Sir Edwin L. Lutyens, K.C.I.E., R.A., has removed his office to 5 Eaton Gate, London, S.W.1. Telephone No. : Sloane 9008. Telegrams : "Aedificavi Sloane, London."

COMPETITIONS OPEN

July 17.—Buildings for a street improvement scheme. Assessor : George Drysdale, F.R.I.B.A. Premiums : 50 guineas and 20 guineas. Conditions, etc., obtainable from the Borough Surveyor, Council House, Walsall, until July 17. (Deposit £1 1s.)

July 31.—Sending-in day. Proposed Nurses' Home at the Royal Asylum, Montrose. Limited to architects practising in the counties of Aberdeen, Angus, Fife, Kincardine and Perth. Assessor : John Watson, F.R.I.B.A. Premiums : £75, £50 and £25. Conditions, etc., obtainable from C. K. Alexander, Clerk and Treasurer, Royal Asylum, Montrose.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor : Andrew N. Prentice, F.R.I.B.A. Premiums : £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, JULY 15

BEAUX ARTS GALLERY, Bruton Street, W. "The Art of Yesterday," an exhibition of Paintings, Drawings and Sculpture by leading artists. Closing date, August 14.

THURSDAY, JULY 16

MARGATE SCHOOL OF ART. Last of twelve lectures on Beauty in Design : "Illumination and Colour." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SCIENCE MUSEUM, Exhibition Road, S.W.7. Lecture on "Lighting and Illumination." By G. Tilghman Richards. **12 noon.**

INSTITUTE OF FUEL, 53 Victoria Street, S.W.1: Meeting in the Marylebone Room, Great Central Hotel, London. **10.30 a.m.**

NATIONAL SMOKE ABATEMENT SOCIETY, 71 Eccleston Square, S.W.1. Council Meeting followed by Open Meeting. Address : "Smoke Abatement from the Manufacturers' Point of View." By W. Prescott, Federation of British Industries. **3.15 p.m.**

FRIDAY, JULY 17

DESIGN AND INDUSTRIES ASSOCIATION. Short Cruise to Norway, returning July 24.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual Exhibition to be held at Winchester. Until July 21.

MUNICIPAL AND COUNTY ENGINEERS. Annual General Meeting and Conference. Birmingham. Until July 20.

SATURDAY, JULY 18

Sunrise, 5.2 a.m. Sunset, 9.9 p.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Visit to the neighbourhood of Guildford by the Brighton and Guildford Chapters.

NEW ESTATES COMMUNITY COMMITTEE, 26 Bedford Square, W.C.1. Meeting. **12 noon.**

NEW ESTATES CONSULTATIVE COUNCIL, 26 Bedford Square, W.C.1. Meeting. **2 p.m.**

MONDAY, JULY 20

VICTORIA AND ALBERT MUSEUM, Cromwell Road, S.W.7. Lecture on "Ironwork." **12 noon.**

THE COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND. Public Meeting at Shire Hall, Hereford. **2.45 p.m.**

TUESDAY, JULY 21

THE LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. Visit to the new abattoir, Prescot Road. **5 p.m.**

WEDNESDAY, JULY 22

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to St. Mary-le-Bow, Cheapside, E.C.2. Tickets obtainable from the Secretary. **3 p.m.**

THURSDAY, JULY 23

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to new Offices of *Punch*, Bouverie Street, E.C.4. Tickets obtainable from the Secretary. **3 p.m.**

BRITISH MUSEUM, Bloomsbury, W.C.1. Lecture on "Origins of Architecture."—II. (Roman, etc.) **12 noon.**

SATURDAY, JULY 25

Sunrise, 5.11 a.m. Sunset, 9.0 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Luxembourg, visiting Dinant, Lesse Valley, Ardennes Forest and Treves. Return August 4. Full particulars may be obtained from the Secretary.

MONDAY, JULY 27

INSTITUTE OF PUBLIC CLEANSING. International Conference, Guildhall, London. Until July 31.

TUESDAY, JULY 28

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to Welwyn Garden City. Tickets obtainable from the Secretary. **3 p.m.**

THURSDAY, JULY 30

NATIONAL PORTRAIT GALLERY, St. Martin's Place, W.C.2. Lecture on "Inigo Jones." By John Steegmann, M.A. **3 p.m.**

SATURDAY, AUGUST 1

Sunrise, 5.22 a.m. Sunset, 8.50 p.m.

VICTORIA AND ALBERT MUSEUM, Cromwell Road, S.W.7. Lecture on "Ecclesiastical Metalwork." **12 noon.**

MONDAY, AUGUST 3

Bank Holiday.

SATURDAY, AUGUST 8

Sunrise, 5.33 a.m. Sunset, 8.38 p.m.

SATURDAY, AUGUST 15

Sunrise, 5.44 a.m. Sunset, 8.24 p.m.

MONDAY, AUGUST 17

Closing date of THE ARCHITECTS' JOURNAL July Holiday Sketches Competition.

SATURDAY, AUGUST 22

Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

TRADE NOTES

An important announcement has just been made in connection with the electrical heating of buildings. It is that Messrs. Barker, Young & Co. will in future be solely responsible for the marketing in Great Britain and the Irish Free State of the Unity tubular heater, the Morganite system of radiant heating and the Electrorad system.

The Unity tubular heater, which enjoys a wide popularity, is manufactured by Messrs. Young, Osmond and Young, Ltd., and has hitherto been marketed by them. The Morganite system of radiant heating, which has recently become prominent in connection with the heating of schools, is manufactured by the Morgan Crucible Co., who have been responsible for the compilation of much data on that form of heating. The Electrorad system is manufactured by the National Radiator Company and has hitherto been marketed by the Electro-Gas Development Co., Ltd., who have effected a large number of installations on this system.

These three systems have, in the past, been commercially competitive, but they are, it is understood, in reality technically complementary. Thus it was thought that the greatest service could be rendered to the profession, etc., by the formation of a centralized organization dealing exclusively with the electrical heating of buildings and possessing the sum total of experience and manufacturing resources. The firm of Messrs. Barker, Young & Co., therefore, has been specially formed to fill this need. It is claimed to comprise a technical staff of wide experience both in heating and electrical technology, who will be able to give reliable and unprejudiced advice on all electrical heating problems.

The three systems which have hitherto been in competition have one essential point in common: namely, that they depend not upon thermal storage but upon the instantaneous conversion of electrical energy into heat, and the difference between them lies purely in the matter of dissipating this heat into the room. The systems differ widely in so far as the radiators are dissimilar in construction, appearance, weight and surface loadings. Also, the method of fixing and the positions in which the radiators are placed are unique to each system.

The Unity tubular system depends for its operation upon a mixture of low-temperature radiation and convection. The Morganite radiator system depends upon low-temperature radiation of relatively high intensity delivered from a small service. The Electrorad low-temperature panel system emits a high proportion of radiation over a wide surface at a low surface temperature.

The Morganite system, therefore, is most suitable for buildings where the degree of ventilating is excessive and where it is necessary to minimize convection as far as possible and to provide for a distribution of radiation strictly in accordance with the relative heat losses of the room through the walls, ceiling or floor. The Unity tubular system is, of course, well known as one of the simplest methods of space warming by electricity that has yet been devised, as may be testified by the fact that over 2,000 installations are now in operation. The Electrorad low-temperature panel system consists of an extensive metallic plate which is warmed over its surface by means of removable elements located in coils on the rear face of the plate. When fitted to a

Mr. E. Mac Young
(of Young, Osmond and Young, Ltd.)

wall or ceiling it projects 1¼ ins. as a maximum and presents the appearance of a moulded architectural panel. It may also be recessed in the plaster or concrete. The application of this system has hitherto been confined to schools, private houses and first-class office buildings.

*

Messrs. Concrete, Ltd., of Leeds and London, have issued a new catalogue describing and illustrating their Bison precast and tile floors and roofs. There is no difference in the strength obtained from the two floors, but the observations in the catalogue, some of which are as follows, will be found helpful to architects in arriving at a decision as to which class of floor is more suitable for any particular purpose.

Owing to the fact that Bison precast units are grouted and not laid in one operation, they do not "ring" to the extent that a tile floor does. The makers, therefore, would recommend a precast floor as being more soundproof than a tile floor. Bison precast flooring, since it requires no timber shuttering, is speedy in erection, and the fact that it is precast allows of it being walked on by other trades immediately it is in place. There is also no wet concrete to contend with other than that used for grouting up. As regards adaptability, a tile floor has the advantage over a precast floor, and should be used wherever there is any question as to spans and possible bearings, since a precast floor relies upon accurate dimensions and is often at fault where these have to be changed as the contract proceeds. If plaster is required on the under surface a tile or precast floor will take this equally well. Where plaster is not to be used, a tile floor is unsightly, and a precast floor with pointed joints has a much better appearance. These, the firm state, cover some of the outstanding questions which are raised in considering a floor. While each type of floor has certain advantages over the other, there is little to choose between them. The precast floors have a big advantage in speed in erection at the site and the hollow tile floors have the advantage for big spans and in buildings on an awkward site. In the catalogue is printed an imposing list of London and provincial buildings in which the firm's precast or tile floors have been used.

*

The use of bricks made from white burning clay for light reflection is becoming increasingly common, particularly in big blocks of flats and office buildings in the West End. The chief reasons for this are the mellow appearance avoiding all glare, the very low cost and the high structural strength and weathering qualities of the "Phorpres" quality. An entire works of London Brick Company and Forders, Ltd., is now concentrated upon the production of these bricks, and this simplification has reduced production costs considerably.

The Directors of Westminster Bank Limited have declared an interim dividend of 9 per cent. for the half-year ended June 30 on the £4 shares, and the maximum dividend of 6¼ per cent. on the £1 shares for the same period. The dividends (less income tax) will be payable on August 1.

Morganite radiation thermostat desk type.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Surrey Education Committee has approved plans for erection of a secondary school for boys at BEDDINGTON at a cost of £43,200.

The Surrey Education Committee has decided to proceed with the provision of two mixed central schools, each for 360 children, in the BEDDINGTON and WALLINGTON area.

The BERMONDSEY B.C. has approved plans for the erection of fifty flats in Pages Walk and twenty-four flats in Elgar Street.

The BERMONDSEY B.C. is to prepare three clearance schemes for the Elgar Street, Charlotte Place, and Bryants Alley areas.

Plans passed by BERMONDSEY Corporation: Alterations, St. Helena Tavern, St. Helena Road, for Messrs. Hoare & Co., Ltd.; eight tenements, Paradise Street, for Messrs. Geo. Parker and Sons, Ltd.

The Surrey Education Committee has submitted to the Board of Education plans for the erection of a secondary school at COULSDON, at a cost of £47,000.

Plans passed by the DARTFORD U.D.C.: Extensions, Prince of Orange public-house, Heath Street, for Messrs. C. N. Kidd and Son, Ltd.; offices, off Hythe Street, for Messrs. Daren, Ltd.; club premises, Spital Street, for the Dartford Conservative Club, Ltd.; seven bungalows, Windsor Drive, for Mr. G. H. Giles; seven bungalows, Tile Kiln Lane, for Mr. C. A. Taylor.

The HACKNEY B.C. has scheduled several areas, involving some 200 houses, for clearance schemes.

Plans passed by the ILFORD Corporation: Eight shops and houses, Eastern Avenue, for Mr. L. W. Robinson; thirty-two houses, Park View Gardens, for Mr. J. Aldridge; three shops and houses, Loxford Parade, eight houses, Vaughan Gardens, for Mr. T. Anders; two houses, Park Road, for Mr. E. Meredith; two houses, Roy Gardens, eight houses, Falmouth Gardens, eight houses, Moss Terrace, workshop, Green Lane, and twenty-six houses, Kelsie Gardens, for Mr. G. F. Siegerts; thirty-nine houses, Cedar Park Gardens, for Mr. F. Smith; eighteen houses, Vista Drive, for Mr. P. G. Ashton; four houses, Glendale Avenue, for Mr. W. Crampin; eight houses, Tomswood Hill, for Messrs. Haines and Warwick, Ltd.; two houses, The Drive, for Mr. A. P. Griggs; twenty-six houses, Glenwood Gardens, for Mr. A. Smith; thirteen houses, Henley Road, for Messrs. E. Glenny and Son; eighteen houses, Campbell Avenue, for Mr. W. Wakeling; two houses, Redbridge Lane, for Mr. W. M. Edwards; five houses, Redbridge Lane, for Messrs. Baskett and Brown; six houses, Thornton Road, for Mr. W. L. Thompson; alterations, 245 High Road, for Messrs. Cuthbert Lake and Sutton; alterations, 282 Henley Road, for Messrs. Storrar and Hunt; additions, United Methodist schools, Eastern Avenue, for Messrs. G. Baines and Son.

The Surrey Education Committee has approved plans for the new Tiffin County School for Girls at KINGSTON, the cost being estimated at £45,000.

The Surrey Education Committee is preparing detailed plans for extensions at the KINGSTON Technical Institute.

The Surrey C.C. has appointed Messrs. Douglas Matthews, Son and Ridley as architects to prepare plans for extensions at the RICHMOND hospital.

The trustees of Percy Hall, Abbey Street, and Jamaica Road, ROTHERHITHE, are to rebuild the premises.

The governors of the WIMBLEDON School for Girls have decided to erect a gymnasium at a cost of £2,930.

SOUTHERN COUNTIES

Plans passed at BRIGHTON: Two houses, Graham Avenue, for Mr. E. H. Rowe; two bungalows, Reservoir Road, for Miss L. Anson; seven houses, King Charles Avenue, Woodingdean, for Mr. W. H. Clark; recreation room, Whitehawk Road, for St. Mark's Parochial Church Council; alterations, 1 Belvedere Terrace, for Palmeira Avenue Mansions Estate Co.; additions, Convent of Our Lady of Lourdes, London Road, Withdean, for the Rev. Mother Superior; two houses, Vernon Avenue, Woodingdean, for Mr. H. King-Jones; extension of warehouse, 28A Sillwood Street, for Mr. S. A. Feldwicke; new classrooms, St. Mary Magdalen's Schools, Upper North Street, for the managers.

The Hampshire Education Committee is to enlarge the CHILWORTH school at a cost of £7,000.

The Hampshire Education Committee is to erect a junior school at WOOTTON MILTON, at a cost of £3,840.

SOUTH-WESTERN COUNTIES

The CHELTENHAM Corporation has asked the Borough Engineer to report as to the desirability of revising the building bylaws in connection with representations by the Naunton Estates, Ltd., for the use of hollow blocks in lieu of bricks.

Plans passed by the CHELTENHAM Corporation: Cinema, Winchcomb Street, for Albany Ward Theatres, Ltd.; four houses, Naunton Lane, for Naunton Estates, Ltd.; house, Charlton Lane, for Mr. G. E. Wild; cloak-rooms, etc., St. Paul's Practising School, St. Paul's Road, for the College Committee; extensions, Savoy Hotel, Bayshill Road, for Mr. F. Gregg.

MIDLAND COUNTIES

The BIRMINGHAM Corporation is to obtain tenders for leasing the island site in High Street for development.

The BIRMINGHAM Corporation is to erect twelve houses for the police on the Weoley Castle estate and the Daisy Farm estate at a cost of £5,200.

The BIRMINGHAM Corporation is to reconstruct and enlarge the Holyhead police station at a cost of £6,500.

The DUDLEY Education Committee is obtaining tenders for the erection of a senior school, Brewery Fields, to the plans of Messrs. Crouch, Butler and Savage.

The NEWARK R.D.C. is to erect twenty houses in the parish of Balderton.

NORTHERN COUNTIES

The HULL Corporation is now to obtain tenders for the construction of baths in Albert Avenue.

The HULL Corporation has approved the layout, prepared by the city architect, for the erection of houses in Barnsley Street.

The HULL Corporation is to obtain tenders for the erection of a further 600 houses on the Endyke estate.

The LANCASTER Corporation has adopted a scheme, prepared by the borough engineer, for the development of the Ryelands estate, provision being made for bowling greens, putting greens, playground shelters, etc., at a cost of £8,000.

The MANCHESTER Education Committee is now obtaining tenders for the erection of a senior school at Withington.

The MANCHESTER Education Committee has accepted the tender of Messrs. Ogden Bros., Ltd., Oldham, for extensions at New Moston Council school.

The MANCHESTER Corporation has had plans prepared for the erection of residential flats at Fog Lane, Didsbury, and asked the sub-committee to report on the general question of the erection of residential buildings or flats.

The MANCHESTER Corporation is seeking grants for schemes for the erection of wash-houses at Collyhurst and Abbey Hey.

The MANCHESTER Corporation is to erect two blocks of shops at Moor End, Northenden.

The MANCHESTER Education Committee has accepted the tender of Messrs. Ogden Bros. Ltd., Oldham, for the erection of a nursery school and domestic block at Palmerston Street school.

The MANCHESTER Education Committee has accepted the tender of Messrs. Tinker & Young, Ltd., for the erection of new buildings for the Collyhurst council school.

The Lancashire Education Committee is to erect a branch county library at PRESTWICH.

The ROCHDALE Corporation is to erect a new fire-station and thirty-two dwellings for the accommodation of the firemen.

The SALFORD Corporation is to erect 138 flats at Wheaters Field, Broughton, at a cost of £75,750.

The SALFORD Corporation is to erect conveniences in Seedley Park, at a cost of £1,200.

Plans passed by the SHEFFIELD Corporation: Two houses, Richmond Road, for Mr. V. L. Ward; three houses, Kennedy Road, for Messrs. J. Marsh and Son; four houses, Whirlow Grove, for Mr. W. Darwent; three houses, Bobcroft Grove, for Mr. W. Croft; two houses, Harley Road, for Mr W. Green; fourteen houses, Chesterfield Road, for Mr. J. H. Dyson; two houses, Harley Road, for Mr. W. E. Mottram; two houses, Struan Road, for Mr. D. Richervy; two houses, Haugh Lane, for Mr. G. M. Taylor; four houses, Norton Lees Crescent, for Messrs. Bonser Bros.; two houses, Redmires Lane, for Mr. S. Peat; two houses, Barnsley Road, for Messrs. Oxspring Bros.; twelve houses, Hall Road, for Messrs. W. and E. Sadler, Ltd.; six houses, Parkhear Road, for Mr. A. Ramsay; bank, Ecclesall Road, for Sheffield Savings Bank; four houses, Dalmore Road, for Messrs. Plant Bros.; four houses, Richmond Road, for Mr. F. Talbot; four houses, Retford Road, for Mr. J. E. Payling.

The STOCKPORT Corporation is to erect 558 houses on the Garners Lane estate.

The Durham County Public Assistance Committee is to erect relief offices at TANFIELD, at a cost of £1,600.

In connection with the Seacombe Ferry improvement scheme, the WALLASEY Corporation is to erect a new booking hall and clock tower.

The WARRINGTON Corporation has decided to provide 119 houses for persons to be displaced through the James Street clearance scheme.

Plans passed by WARRINGTON Corporation: Extensions to bakery, Goulden Street, for Messrs. Bennetts; three houses, Manchester Road, for Mr. R. Smith; assembly hall, Westy Lane, for Rev. J. L. Cullen; building, Priestley Street, for Whitecross Co., Ltd.; bridge over road, Rose and Crown Street, for Messrs. Thomas Whittle and Sons, Ltd.; alterations, works, Academy Street, for Messrs. Rylands Bros., Ltd.

SCOTLAND

The GLASGOW Education Committee has approved a site at Carnwadric for the erection of an elementary school, and, in the meantime, is to erect a temporary school with ten classrooms.

The GLASGOW Education Committee has acquired land for the extension of St. Columba's Roman Catholic school at Grovepark Street.

The GLASGOW Corporation has asked the medical officer of health to report on the advisability of establishing a hospital for nervous diseases.

Plans passed by the GLASGOW Corporation: Temporary building, Hillview Street, Shettleston, for the Apostolic Church; temporary hall, Paisley Road, Cardonald, for the Cardonald Unionist Association.

The GLASGOW Education Committee has obtained sanction to borrow £6,000 for the erection of a temporary school at King's Park.

The GLASGOW Education Committee is to undertake alterations and repairs at various schools, at a cost of £28,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton ..	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . Sq.	1 1 0
,, 1" . . ,,	1 3 6
,, 1¼" . . ,,	1 5 6
,, 1½" . . ,,	1 11 0
,, 1¾" . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . ,,	17 6
,, 1¼" . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . ,,	1 0 0
,, 1¼" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			⅝"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¾"	1"	1¼"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . 58½	,, water .	45
Steam . . 55	,, steam .	40

FITTINGS.

Per cent.		Per cent.
Gas . . . 57½	Galvanized gas .	47½
Water . . 52½	,, water .	42½
Steam . . 47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

	3"	4"
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	s. d. 7	s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

	5"	6"
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	19 0
,, drawn pipes . . . ,,	19 6
,, soil pipe . . . ,,	22 6
,, scrap . . . ,,	9 0
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.		s. d.
Sheet glass, 21 oz. . . F.S.			3½
,, ,, 26 oz. . . ,,			4½
Arctic glass . . . ,,			5
Cathedral glass . . ,,			6
Hartley's rough rolled . ,,			9
Do. wired plate . . ,,			1 3
¼" Polished plate, n/e 1 . ,,	1 0	to	1 3
,, ,, 2 . ,,	1 2	,,	1 7
,, ,, 3 . ,,	1 7	,,	2 5
,, ,, 4 . ,,	2 1	,,	2 11
,, ,, 6 . ,,	2 3	,,	3 2
,, ,, 8 . ,,	2 6	,,	3 6
,, ,, 12 . ,,	2 9	,,	3 8
,, ,, 20 . ,,	3 0	,,	3 11
,, ,, 45 . ,,	3 3	,,	4 1
,, ,, 65 . ,,	3 7	,,	4 6
,, ,, 90 . ,,	3 10	,,	4 9
,, ,, 100 . ,,	4 0	,,	5 0
Vita glass, sheet, n/e 1 . ,,			1 0
,, ,, ,, 2 . ,,			1 3
,, ,, ,, over 2 . ,,			1 9
,, ,, plate, n/e 1 . ,,			1 6
,, ,, ,, 2 . ,,			3 0
,, ,, ,, 5 . ,,			4 0
,, ,, ,, 7 . ,,			5 0
,, ,, ,, 15 . ,,			6 0
,, ,, ,,over 15 . ,,			7 6
Putty, linseed oil . . lb.			3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" 15' 0" deep and cart away	"	12 0
If in stiff clay	add "	3 0
If in underpinning	" "	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
½" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1½" do.	"	3 4 0
1¾" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½" do.	"	2 1

CARPENTER AND JOINER—*continued.*		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER		s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 15 6
Do. in flashings	"	1 18 0
Do. in covering to turrets, etc.	"	2 5 0
Do. in soakers	"	1 11 0
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

	½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends "	7	9	1 0	1 3	2 0	—
Boiler screws and unions "	3 6	4 0	5 6	8 0	—	—
Lead traps "	—	—	—	7 6	10 6	—
Screw down bib valves "	7 6	10 6	12 6	—	—	—
Do. stop cocks "	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper from	"	3 0

STAIRCASE IN A STUTTGART STORE

HOUSED IN A SEMICIRCULAR WINDOW BAY FEATURE, CONSTRUCTED OF STEEL AND GLASS

[*Eisenlohr and Pfennig, Architects*

THE FEATURE AS PRESENTED TO THE CAMERA'S EYE

THE subject chosen for illustration above, and by way of a detail drawing overleaf, is one of the two principal staircases in the new building of the Breuninger Store, Stuttgart. The actual stairs are within the building, but the half-landings project into a semicircular bay, which is glazed through its entire height, and are cantilevered from beams which form part of the general steel frame.

The window is constructed from steel channels, running vertically where the windows meet the two walls, and horizontally at 3 ft. 3½ in. centres. Every fourth horizontal member is level with a landing, to which it is held by three steel brackets spanning the 12 ins. or so of space between the edge of the landing and the window.

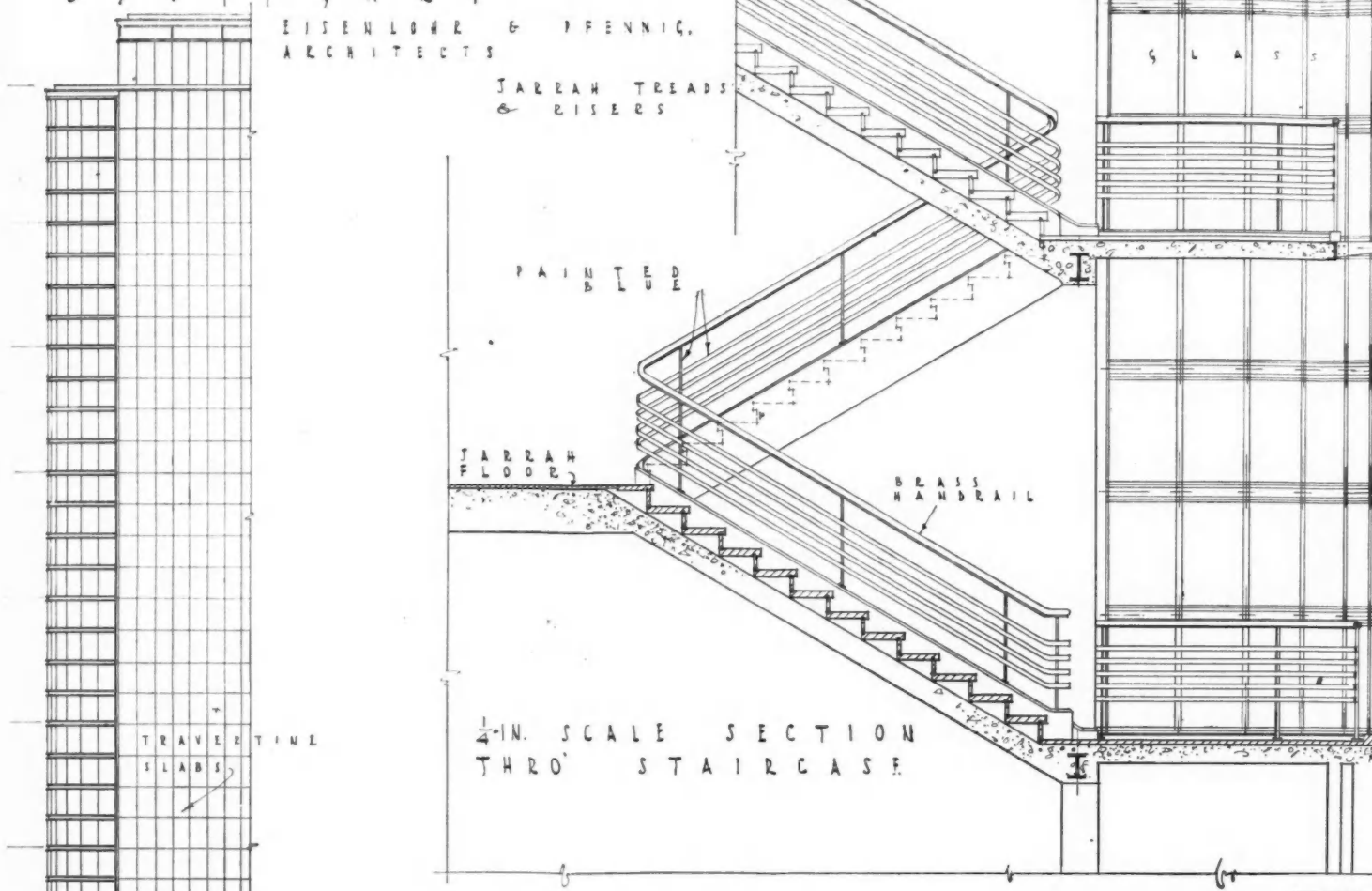
The joinery generally is of Jarrah, stained to a deeper tone of its natural colour, and polished. The treads are 12½ ins. and the risers 6½ ins., resulting in very easy going, which could not have been obtained had the landings been contained within the building.

The ironwork of the balustrades is painted blue, and the circular handrail is of brass; all wall surfaces are painted bright green, with a fine stippled finish. The building generally is faced with slabs of travertine, 3 ft. 3½ ins. by 1 ft. 9¾ ins. by 2 ins. thick, which line through with the horizontal bars of the window.

STAIRCASE & WINDO

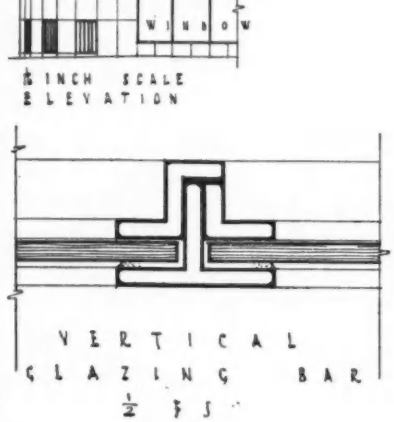
BREUNINGER BUILDING STUTTGART

EISENLOHR & PFENNIG, ARCHITECTS



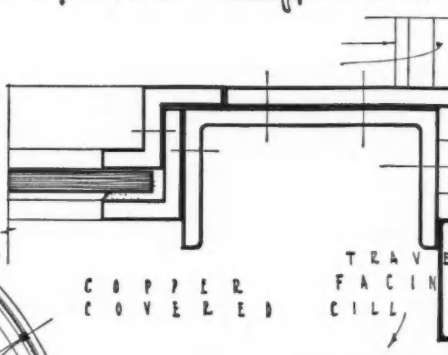
¼-IN. SCALE SECTION THRO' STAIRCASE

⅛ INCH SCALE ELEVATION

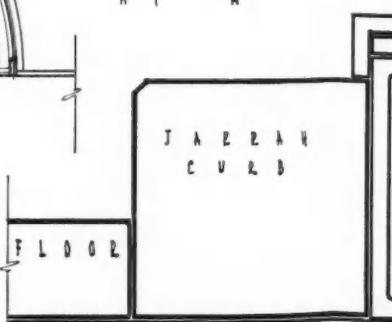


¼-IN. SCALE PLAN AT FIRST LANDING

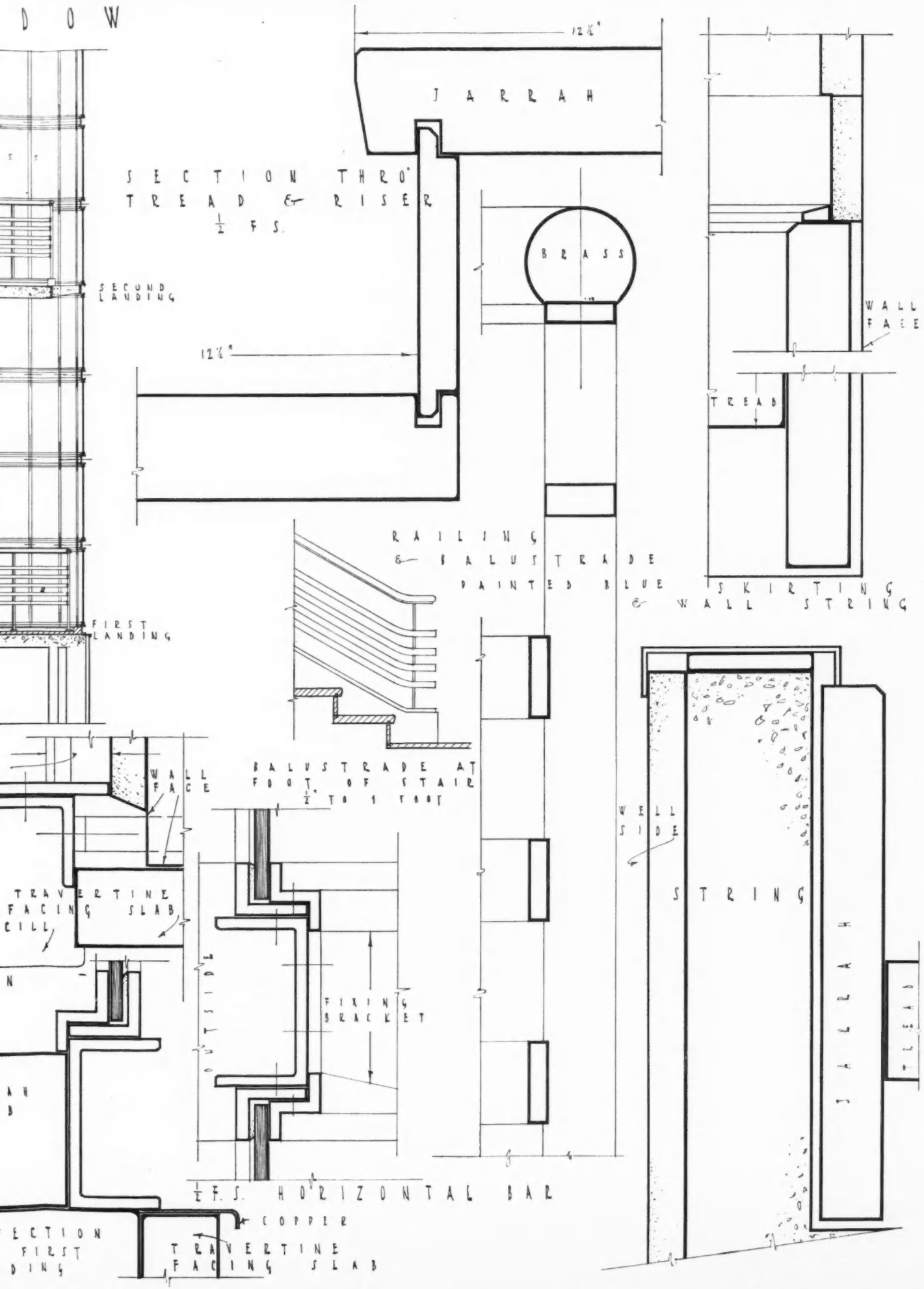
VERTICAL GLAZING BAR ½ FS



½ F.S. PLAN AT 'A'



½ FS SECTIO AT FIRST LANDING


D O W
SECOND LANDING
FIRST LANDING
12½"
J A R R A H
S E C T I O N T H R O'
T R E A D & R I S E R
½ F S.
12½"
B R A S S
R A I L I N G
& B A L U S T R A D E
P A I N T E D B L U E
WALL FACE
TREAD
S K I R T I N G
& W A L L S T R I N G
WALL FACE
B A L U S T R A D E A T
F O O T O F S T A I R
½" TO 1 FOOT
TRAVERTINE FACING SLAB
CILL
FIRING BRACKET
½ F. S. H O R I Z O N T A L B A R
COPPER
T R A V E R T I N E
F A C I N G S L A B
WELL SIDE
S T R I N G
J A R R A H

IN BECHSTEIN HALL, W.

WALL TREATMENT IN FABRIC, WOOD AND GLASS

[*Sir John Burnet & Partners, Architects.*

LOOKING ACROSS THE LOBBY FROM FRONT TO BACK SHOWROOMS

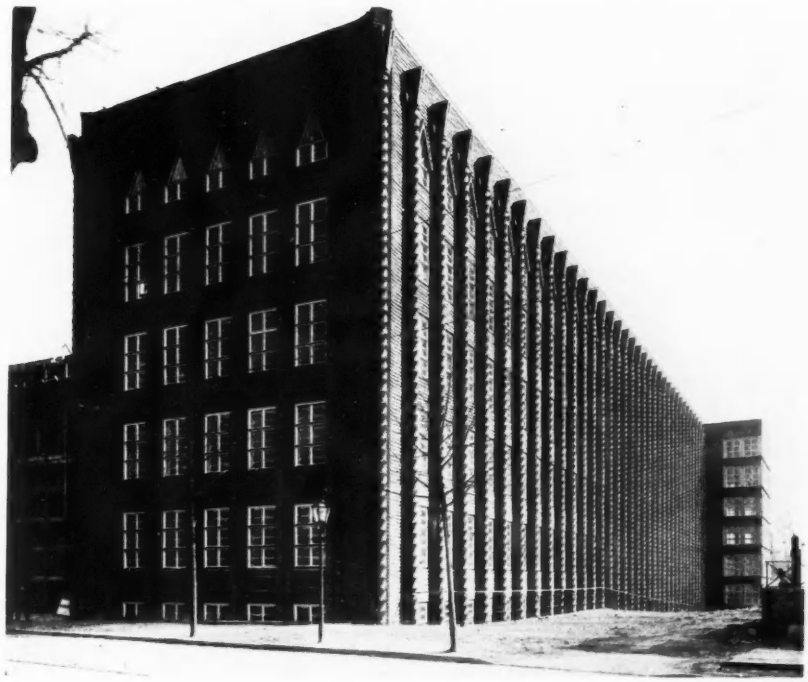
ABOVE is a photograph and overleaf are details, drawn to scales of half full-size and ¼-in. to one foot, of one of the walls of the staircase hall or lobby, which is situated between the front and back showrooms of Bechstein Hall, Brook Street, W.

The doors on the left lead to the staircase; the others to the back showroom. The former are of walnut and are fitted with fire-resisting panels of clear glass, relieved with bands of acid-treated glass. The leaves have antique bronze grip-and-push handles. On the surrounding wall is a woven fabric, specially designed with musical instruments as motifs. The floor is in oak blocks laid to pattern, the moulded skirting and base are of black wood, and the ceiling and frieze are of plaster, painted pale cream.

This detail is supplementary to that taken from the same building which was the subject of a photograph and drawings in the issue for June 24 last.

SELECTED PRECEDENTS:

FACTORY FASHIONS FROM ABROAD



1. THE HAUS NEUERBERG CIGARETTE FACTORY, HAMBURG

[Fritz Höger, Architect.

THE factory is far less stereotyped in its external character than is popularly imagined. Roughly speaking, there are two ways in which it can be designed: it can either be considered as a purely engineering job, careless of niceties of appearance; or it can be planned so as to make the best of what is generally by no means necessarily unpromising raw material. In the latter class (with which we are alone concerned here), two schools of design exist. One seeks to ennoble the factory with intimate graces borrowed from the idiom of public or domestic architecture; the other frankly accepts it as such, but strives by good grouping and proportion, with a minimum of adventitious detail, to make it express a certain massive industrial dignity.

Figures 1 and 2, the work of a past master of intricate brickwork, are examples of somewhat self-consciously "civic" embellishment. The pleasantly fantastic pattern of the window surrounds in figure 2 certainly redeems the building from the grim, box-like monotony that characterizes so many uniformly-fenestrated factories. In figure 1—where the traditional skill of Hamburg bricklayers was available and has been exploited to the full—the same kind of decoration, in no way germane to the nature of a factory, reappears in a rather exaggerated degree. This building might be mistaken for an important block of offices, such as Herr Höger's "Sprinkenhof" or "Chilehaus" in the same city.

[Fritz Höger, Architect.

2. THE SCHERK PERFUME FACTORY, SÜDENDE, BERLIN

Figure 3, which wears a very English, Neo-Georgian air, is a not unsuccessful attempt to impart something of classic calm to a modern brewery. There are few breweries in beer-drinking (and -exporting) Denmark, but in a small country such as there are, being of considerable magnitude, naturally assume the character of national monuments.

Figures 4 and 6 are compositions in which the central features are towers serving the prosaic function of water cisterns. The latter, erected during the war, is the work of the first architect to make architectural history with a factory building—the famous Turbine-Shop at the A.E.G. Works in Berlin, which dates from 1909. The former, less skilfully handled, evinces good disposition of mass; while the slightly over-architecturalized tower fits well enough into an industrial valley landscape of tall chimneys.

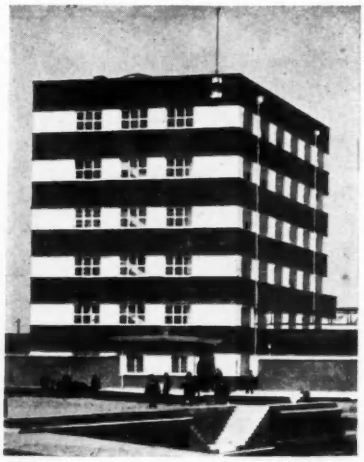
Figure 5 is an example of the simplest possible kind, being a perfectly square, perfectly plain, box-like structure. Yet, though it relies for effect on nothing more than the accentuation of its floor-levels by alternate bands of red-brick and white cement-stuccoed wallage, its unsophisticated appearance is pleasing. P. M. S.

3

By courtesy of Christiani and Nielsen, Copenhagen.]

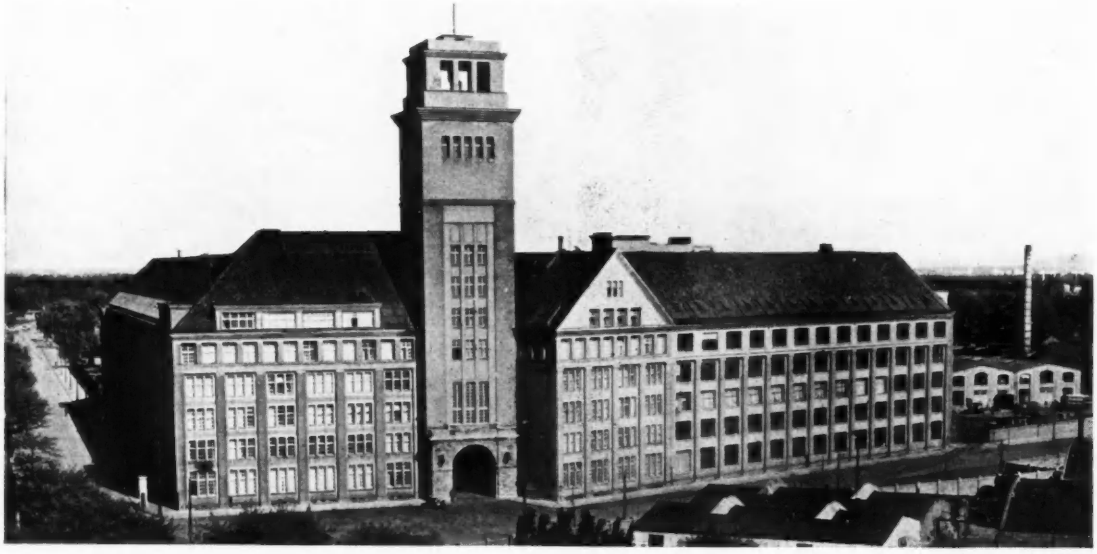
4

5



By courtesy of Dyckerhoff and Widmann, A. G., Wiesbaden-Biebrich.]

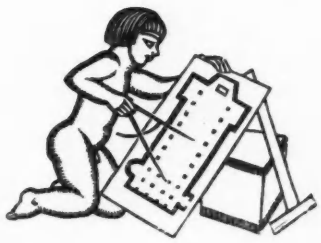
6



[*Peter Behrens, Architect.*

3. *SOUTH JUTLAND BREWERY, DENMARK.* **4.** *THE DALLIX SOAP FACTORY, STOLLBERG, GERMANY.*
5. *RICE MILLS, GDYNIA, POLAND.* **6.** *THE N.A.G. MOTOR WORKS, OBERSCHÖNEWEIDE, BERLIN.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, JULY 22, 1931

OFFICIAL PATRONAGE FOR INDUSTRIAL DESIGN

SO it has come at last ! Design, the poor relation of Industry, has been officially patted on the head and provided with a heartening array of deputy aunts and uncles to watch its welfare.

The Board of Trade has appointed a committee, under the chairmanship of Lord Gorell, to consider the desirability of forming in London a standing exhibition of articles of everyday use and good design, and the desirability of travelling exhibitions of the same kind, both at home and abroad, and (most difficult of all to consider) the constitution of the central body which should be charged with the work of co-ordinating these activities; and, finally, finance.

Whether this committee owes its existence to an official desire to do something or other to stifle the growing volume of criticism concerning our national ineptitude in design, or whether it is the preliminary manifestation of some constructive planning by the Board of Trade to bring design into effective relation with industrial production, the composition of the committee will prevent it from becoming one of those bodies which are determined never to offend permanent officials or powerful politicians and which, with an air of tremendous purpose, achieve exactly nothing.

None of the persons on it is temperamentally disposed to let sleeping boards lie, and we are hopeful of some practical outcome of its work when we see among its members such names as Howard Robertson, Clough Williams-Ellis, Roger Fry, C. A. Richter, Professor E. W. Tristram and Harry Trethowan.

More than one organization that is interested in the design of industrial products is (*ex officio* presumably) represented : the President of the Design and Industries Association, for example. It will probably occur to the committee, in considering their problem of organization, that there are societies in existence whose activities might usefully be co-ordinated for the service of these exhibitions-to-be.

A few months ago it was suggested, quite unofficially, in an article in *The Architectural Review*, that a sort of Islamic marriage of convenience might well be arranged between the Royal Society of Arts, the Design and Industries Association, and the Society of Industrial Artists, so that industrial design might be improved by the pooling of their functions. Those three societies (and particularly the first two) have accumulated much useful experience in the heart-breaking task of acting as liaison between design and industry; and if the new-born committee could make use of that experience, and ultimately bring about a close and amicable partnership between all the organizations that, according to their lights, are tinkering with the problem of betterment in design, it could save itself a lot of costly and discouraging experimental work, and enlist and perhaps direct an abundance of expert help.

But the chief difficulty that confronts the committee is not organization nor even finance; it is the supply of articles of good design, fit to be exhibited. Anyone who inspects in detail the weary miles of muck that line the aisles of the British Industries Fair every year; who examines the fancy goods deparments of retail establishments, large and small; who mourns the snail's progress of modern ideas of design in the trades that are responsible for making the Englishman's home what it usually is—any such conscientious observer is overpowered with depression. It is to be alleviated only by the hope that some day someone or some body of people will cry, with voices influential enough to penetrate to the cobwebbed recesses of counting houses all over England : *THERE IS MONEY IN GOOD DESIGN.*

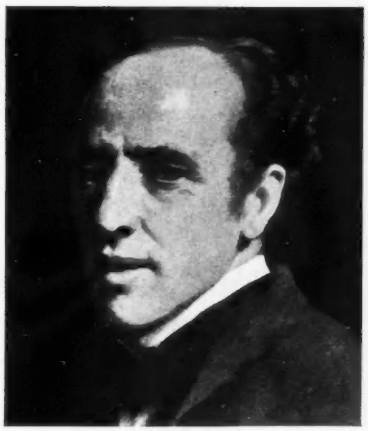
Unless the cash value of good design is made very clear, this Board of Trade committee will find that its standing exhibitions will only demonstrate the fact that British industry is standing still. Only money moves mountains today, and there is a mountain of incompetence to be shifted before we can again hold our own with the nations of Europe in design.

IN CONCRETE, STEEL AND GLASS

The "Volkandinj" Co-operative Society's building at The Hague, by Jan. W. E. Buijs. With the aid of concrete, steel and glass, Dutch architects have been able to produce buildings of a type unknown before this age. Although to an extent they bear an international likeness, there is a subtle difference from those of other countries.

[*From* Modern Dutch Buildings. *See the book review on page 121 of this issue.*

NEWS & TOPICS



Clough Williams-Ellis, F.R.I.B.A.

Howard Robertson, F.R.I.B.A.

As announced in the leading article on page 101, Messrs. Clough Williams-Ellis and Howard Robertson have been appointed members of the committee formed by the Board of Trade to consider the desirability of arranging exhibitions at home and abroad of articles of everyday use and good design.

THE REGISTRATION BILL

As briefly mentioned in the last issue of THE ARCHITECTS' JOURNAL, the Lords' amendments to the Architects (Registration) Bill were considered and agreed to by the House of Commons on Friday, July 10. There was, however, some opposition, chiefly of an obstructive character, by Mr. MacShane and Mr. Ernest Winterton, the two Labour members who so strenuously fought the measure in Committee. Their arguments did not affect the views of the majority of the House, however, and no difficulty was experienced by Lt.-Col. Moore in inducing members to agree with the Lords' amendments. The Bill is now in its final form, and, at the time of writing, is merely waiting for the Royal Assent.

PANELS ON A STATUTORY FOOTING ?

An amendment to the Town and Country Planning Bill has been tabled by Mr. Isaac Foot, Miss Eleanor Rathbone and others, that may make that important measure really useful, and be of enormous help to architects. The amendment seeks to establish the Advisory Committees or panels on a proper and statutory footing. The reasoning is simple, of course. If you give control to local authorities, which is to say, to their engineers or surveyors, what sort of control do you expect to get ? The only possible way to make such control effective is to direct the untrained official with competent advice. Even so, I am not very sure that good work will result. Education alone will be finally effective.

THE ROYAL ACADEMY MEMORIAL

The Royal Academy's memorial to the Prime Minister makes proposals very similar to Miss Rathbone's amendment, and serves to prove how widespread is the desire for planning the resources of the countryside so as to eliminate the waste which spoliation in all its forms does, in fact, represent. Unfortunately for us all, the Town and Country Planning Bill, though looked upon by all parties as a desirable measure, has not made sufficient progress to justify its supporters in thinking that it will become law this session. I am told that such is the case. If true, it may mean very considerable delay, which this country cannot at this moment afford.

BEER GARDENS

Mr. Lansbury, whom Francis Birrell recently described as the only British Minister since Sir Robert Walpole to have a reasonable sense of values, should be supported in his efforts to build " beer gardens " in public parks. By architects, at least, he should be supported. For architects are an understanding race of men, downtrodden, and many are fond of beer in moderation.

A CLOISTRAL SPACE AT THE CENOTAPH

But I set out to discuss Mr. Lansbury's plans for government buildings in Whitehall, where, for the moment, he has been stalemated by the opposition to his suggested building line on the Embankment. It will be remembered that Mr. Lansbury's attention was rather focussed on Whitehall, where he hoped to be able to create a quiet and cloistral space opposite the Cenotaph, and will be now unable to do so without considerable difficulty. As he says, he may have to pull down Richmond Terrace.

*

I like Richmond Terrace for itself, but I don't think I should mind it being pulled down, so long as the Office of Works don't design the building that replaces it. If the Embankment Gardens can be kept (without railings, please) and the cloistral space opposite the Cenotaph allowed for, then Richmond Terrace may be sacrificed, and you will be provided with a very good programme upon which to design the new building.

COMPETITION REGULATIONS REVISED

Revised regulations for the conduct of Architectural Competitions are published in the current number of the *R.I.B.A. Journal*. The revisions, with one exception, seek to avoid unfairness and partiality. The regular staff and present students of a school of architecture providing a sole assessor from its staff are forbidden to take part in that competition. If the assessor is one of three, the ban is lifted. The important new clause makes it quite clear that an assessor may not act as consulting architect unless he has been so appointed before the inception of the competition and the fact is made known to competitors. He may, however, act as arbitrator in any dispute between promotors and architect. Under a new clause these regulations are subject to a waiver by the council or president acting in the interests of the profession or the client. The new clause further defining the position of an assessor will be welcomed because, while it fortifies his judicial position, it gives greater freedom to the individual competitors, who may now know that their individual expression will not be subject to interference or limitation beyond the assessor's report. A man who can win an open

competition should be capable of working out his own salvation afterwards, and it cannot be said that the practice of allowing the assessor to assume paternal control over a young man's work has ever been attended with beneficial results.

POLYGONAL GASHOLDERS

I count the waterless gasholder among the blessings of this new age. To think that those foul red cylinders, rising and falling within their evil-smelling nests of rusting iron, will be replaced by upstanding polygonal towers of fixed dimensions is a fine thought, for these new holders are nobly proportioned, and catch the light in an inspiring way. It is significant that the attempt of an architect to add a dome to a waterless gas holder was everywhere looked upon with amused contempt as an uncalled for gilding of the lily. There is no ornamenting these things; they are sufficient in their own proportions.

PENNY-WISE HASTINGS

Hastings provides me with yet another example of the blithe way in which the annually elected governors of English towns rush, with little or no consideration of the consequences, into expenditure on matters that can only be decided by trained professional men. Hastings held a competition some time ago for a pavilion to hold 2,000 people, which Mr. Vincent Harris won with a "well thought out and straightforward design." The town council, thinking they knew better, turned the design down, and built quite an expensive sort of shelter and bandstand themselves. Now they find that they were penny-wise pound-foolish, and wish they had listened to good advice when it was given them. They have consequently wasted town money which they were elected to spend wisely and with good taste. *Verb. sap.*

HARASSED HOLBORN DWELLERS

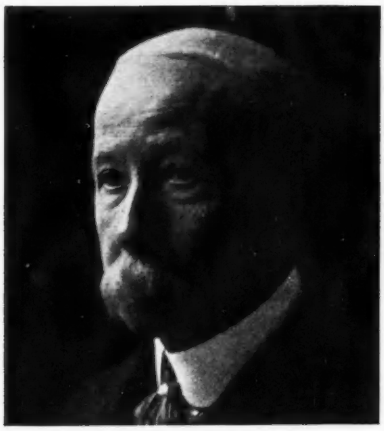
Holborn's new one-way traffic scheme has raised a good many protests from hapless wayfarers asking nothing better than to be allowed to proceed along it or its tributaries with reasonable expedition, upon their lawful occasions. Nor has it left untouched those who have the occupancy of offices on the single routes. A member of the Holborn Borough Council, pointing out that Southampton Street was now unapproachable, except from one direction, added that it was largely used by solicitors or architects, whose clients found it very difficult to call upon them. And they could not use the telephone on account of traffic noises. If the plan were really being proved to operate for the greatest good of the greatest number, there would be some reason for an appeal to the public spirit of the minority; but is it? ASTRAGAL

THE LATE W. R. LETHABY

An Appreciation

BY JOHN GLOAG

WILLIAM RICHARD LETHABY died on Friday at his London home, at the age of seventy-four. Architect, critic and author, he had for many years inspired a school of architectural thought, and with quiet consistency had amplified and applied the teachings of William Morris, cooling their emotionalism to practical temperatures, and reproducing in his teaching and his books something of the mediæval creative spirit. He was President of the Arts and Crafts Exhibition Society, a Vice-President and one of the founders of the Design and Industries Association, and had held the appointment of Principal of the Central School of Arts and Crafts, later being appointed Professor of Design at the Royal College of Art. His special interests and abilities rendered his appointment in 1906 as Surveyor of the Fabric to Westminster Abbey peculiarly happy. He did much valuable work in restoration and preservation, and it was only his age that impelled him to resign, in 1928, his active association with a building he deeply loved.



W. R. Lethaby, F.S.A., F.R.I.B.A., who died in London on Friday at the age of 74, was architect to the Dean and Chapter of Westminster Abbey for over twenty-one years, and a most valuable contributor to architectural literature. A Soane medallist in 1879 and a Pugin student in 1881, he was one of the Founders of the D.I.A.

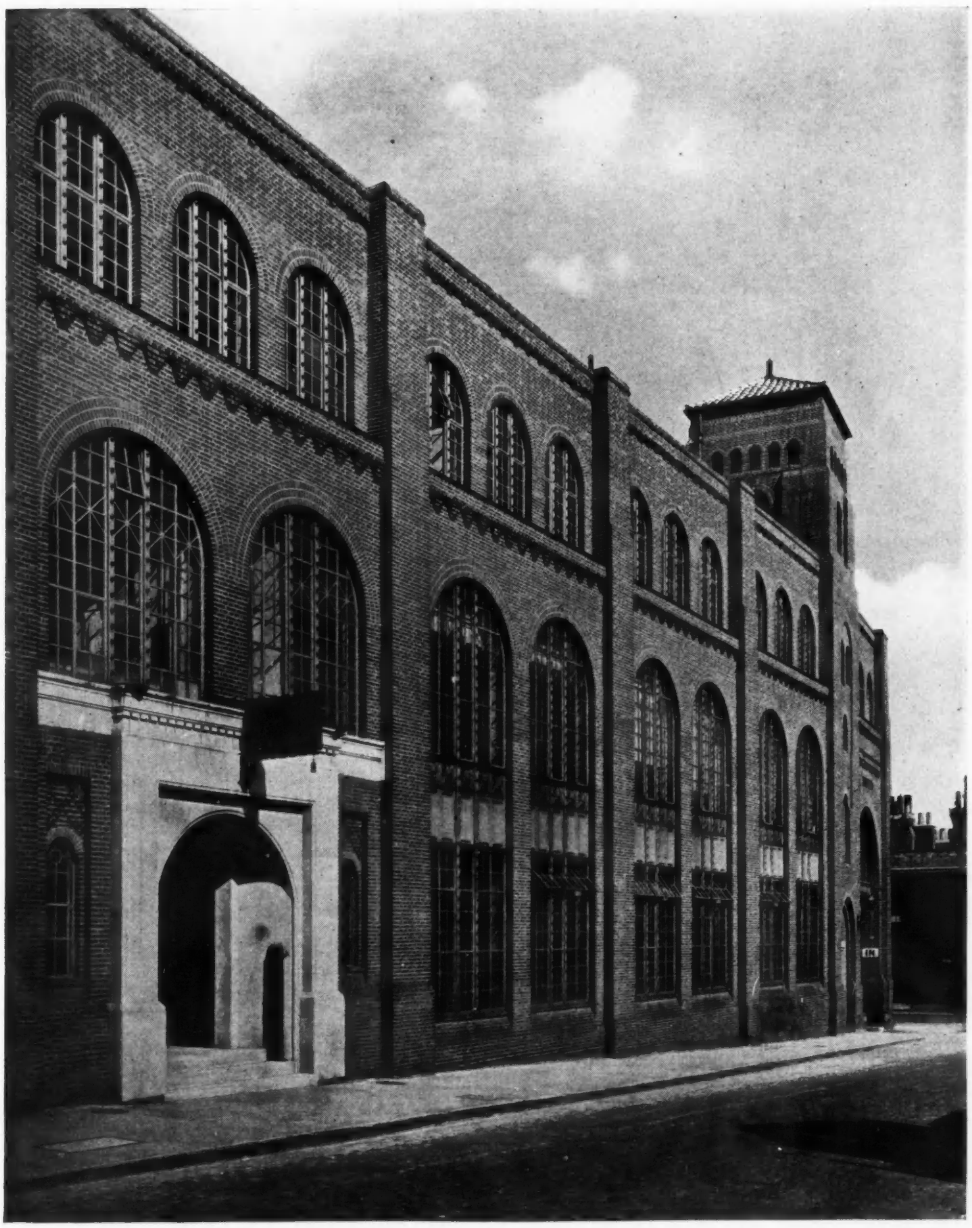
He was a pupil and assistant of Norman Shaw, but it was not as a practising architect that he exerted his influence upon his contemporaries and upon each new generation of architects. Intensely interested in building materials and methods, he became a chronicler of craftsmanship, an archæologist of distinction, and a writer on architecture who always thought in terms of human work, and who held art to be necessity ennobled. "Nothing great or true in building seems to have been invented in the sense of wilfully designed," he once wrote. His suspicion of the Renaissance, when "what we called by the mysterious long word 'architecture' became a question of taste in shapes," is indicated in that most lucid book, *Architecture: An Introduction to the History and Theory of the Art of Building*. But although he had marked preferences in the work of the past, he never rejected his own time, or attempted to resurrect any style. He wished to revive our failing sense of civic order, and to preserve as far as possible the liberties of craftsmen as individual workers, and his vigorously constructive thoughts on these matters are set down in *Form in Civilization*.

Most of his other books are historical or archæological studies, and among them are: *Westminster Abbey and the King's Craftsmen; Greek Buildings Represented by Fragments in the British Museum; St. Sophia* (in collaboration with H. Swainson); *London Before the Conquest;* and *Londinium, Architecture and the Crafts*, an invaluable record of the architectural character of Roman London. But of all his books, *Mediæval Art* is perhaps the greatest, its writing being illumined by his own spiritual and artistic affinities.

Some day it may be possible for a publisher to issue a collected edition of his works, which will enable a future generation to appreciate all that was best in the critical thought of the arts and crafts movement with which he was so sympathetically associated. For years his charm as a writer, and his urgent sense of the importance of æsthetic environment, have rendered a great service to architecture by enlarging public interest in everything concerned with building both in the country and the town.

A LONDON GLASS WAREHOUSE

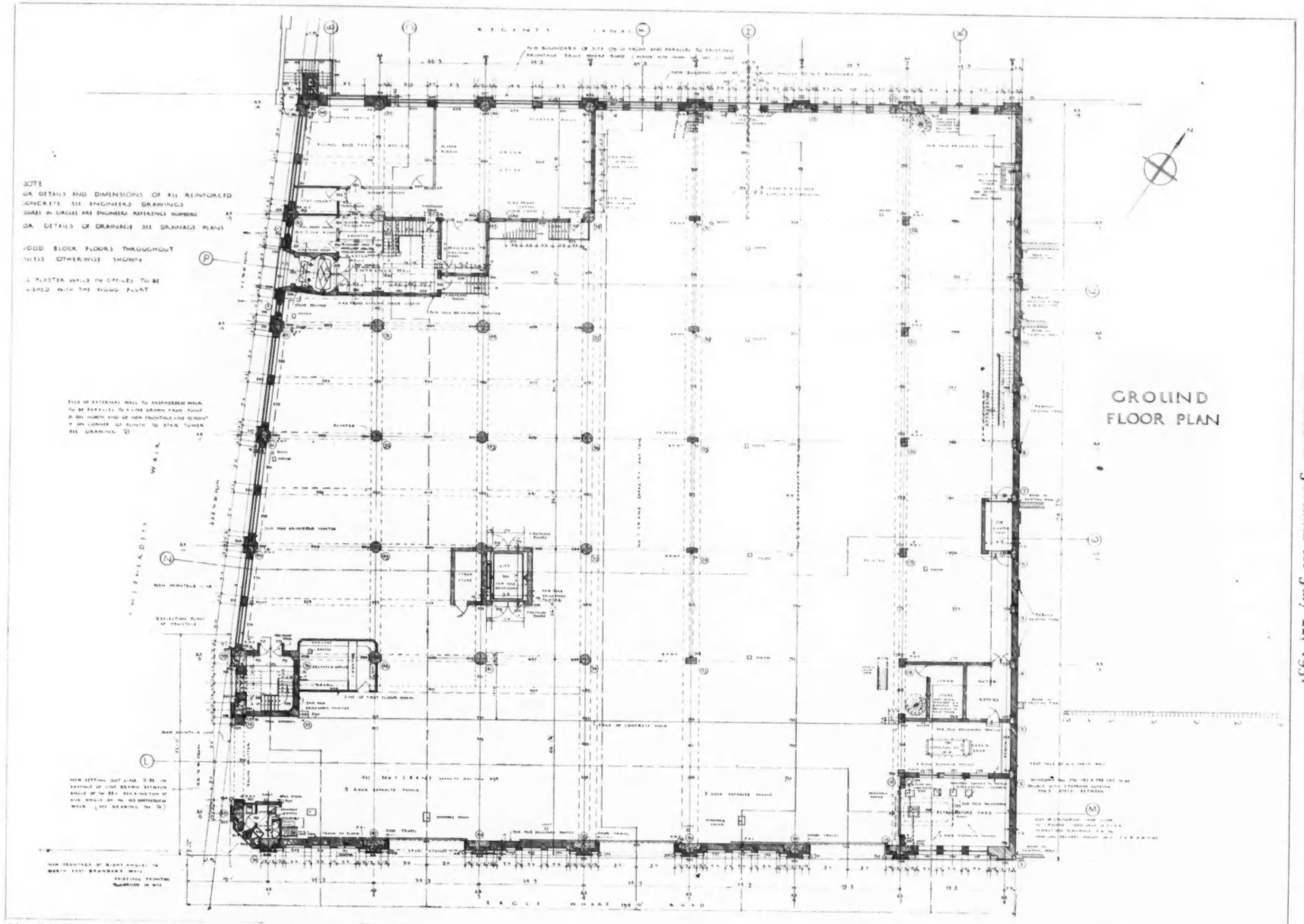
DESIGNED BY SIR JOHN W. SIMPSON, K.B.E.



The main, western front to Shepherdess Walk, N., showing in the foreground the entrance to the offices and, beyond, the entrances to the tower and lorry yard, the architect's working drawings of which are reproduced as one of the supplements in this issue.

IT might seem remarkable at first blush that civilization as we know it today would have been impossible but for the discovery of glass-making. Yet glass was one of the most extraordinary achievements of human genius and was the very foundation upon which modern science—both housing and technical—has been built. It was in 1826 that the name of Pilkington came to be associated with the industry. Thus for more than a hundred years the history of the glass-making branch of the family has been closely interwoven with that of St. Helens. Today the firm owns three large glassworks in that town, in addition to collieries and a brickworks, works at Doncaster and Maubeuge, Belgium, and depots and maintains representatives in many parts of the world.

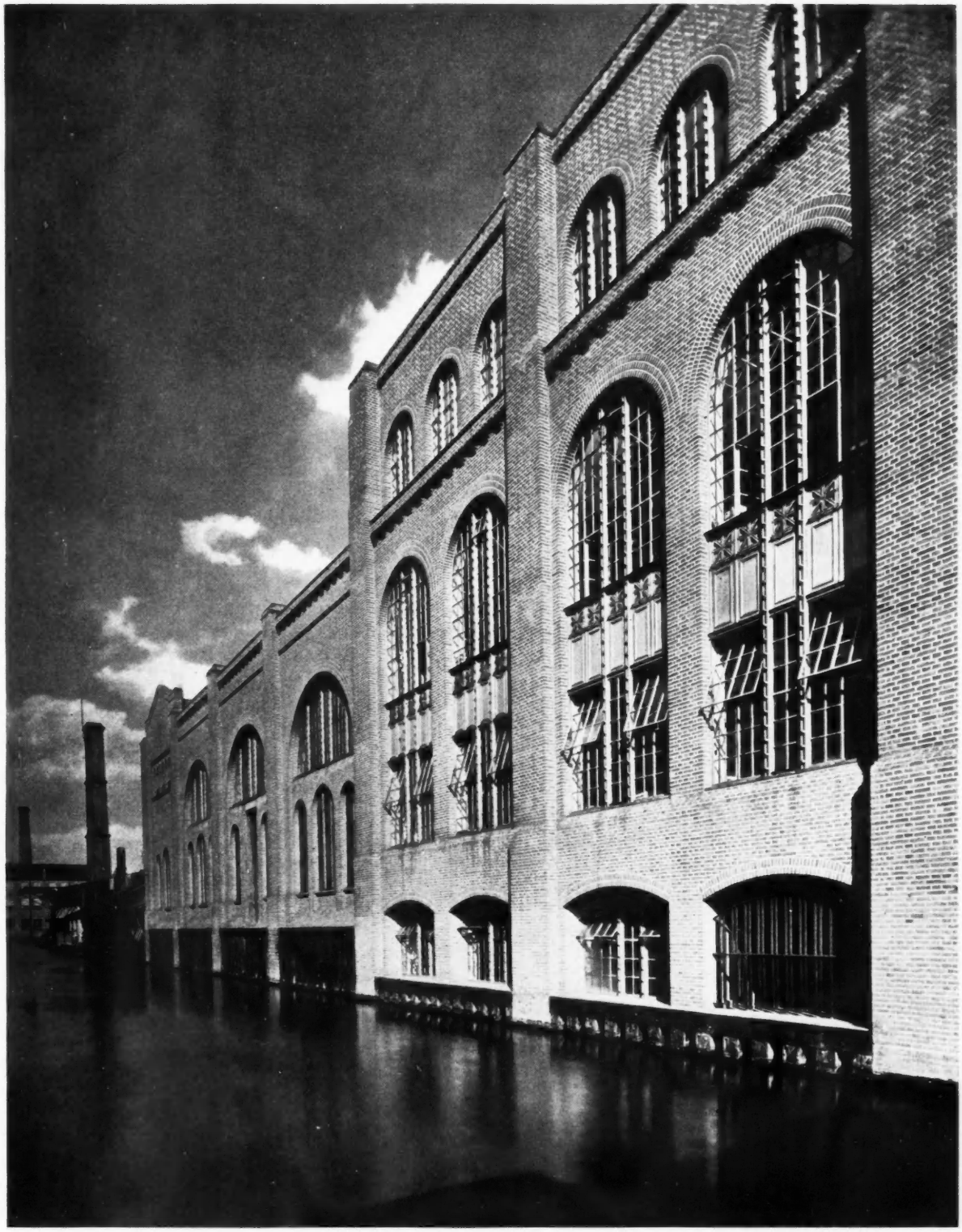
One of their most recent depots is illustrated on this and the following three pages and on one of the special supplements this week. It is situated in Shepherdess Walk and forms a distributing centre for London and its surrounding districts. It is created not to compete with the merchant but as a medium between him and the works. In fact, the building has been aptly described as the fairy godmother of the glass trade. Here large stocks



Glass Warehouse, London, N.]

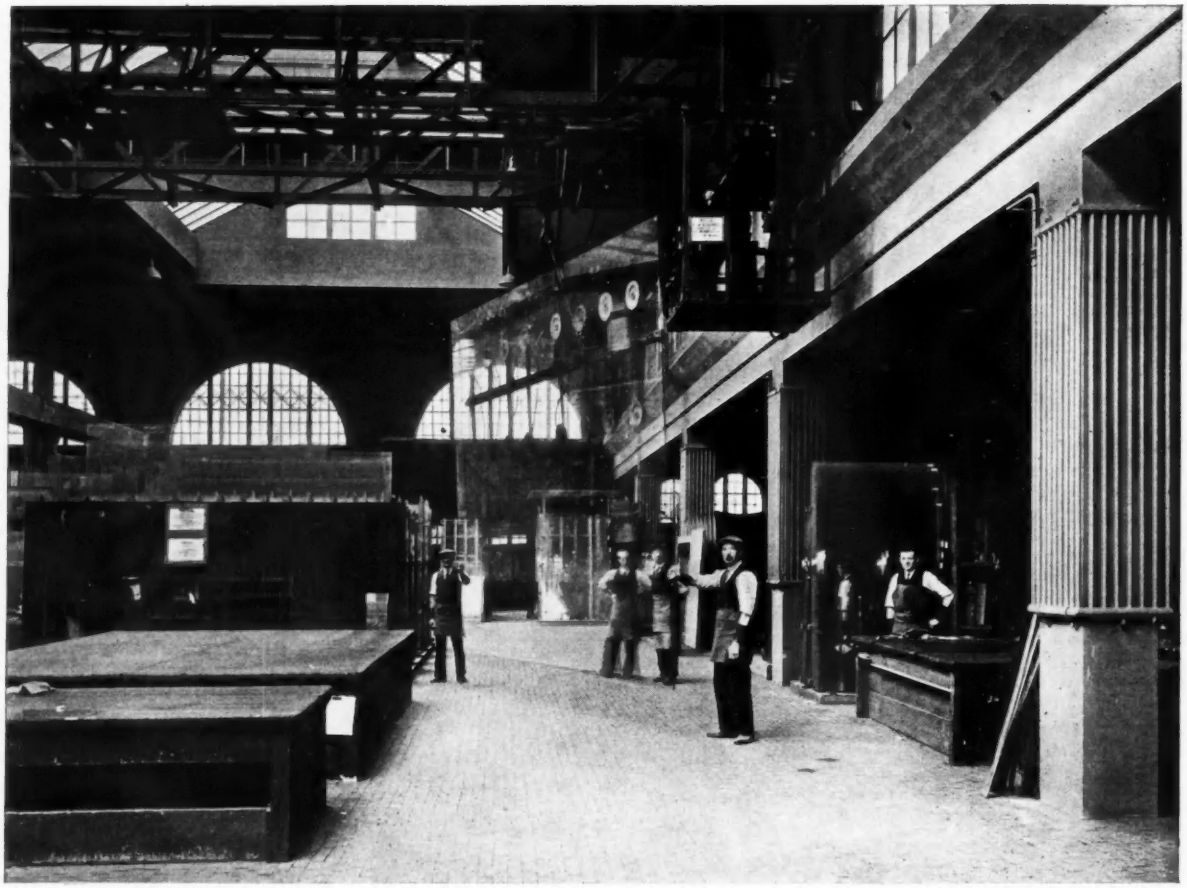
Ground floor plan. The building consists of a small basement, ground, first and second floors and a caretaker's cottage, on the flat roof above.

[*By Sir John W. Simpson, K.B.E.*



[*Glass Warehouse, London, N.*] [*By Sir John W. Simpson, K.B.E.*

The northern portion of the building stands on what was formerly a part of Regent's Canal. The reclamation work was carried out by forming a continuous wall of massed concrete by means of sheet piling, and filling the space enclosed with concrete of a weaker mix.



Glass Warehouse, London, N.] [*By Sir John W. Simpson, K.B.E.*

The "sucker" used to pick up and convey big sheets of plate glass. It consists of a frame of vacuum rubber rings which fix themselves on the flat surface of the glass and hold on to it by suction while the crane moves the frame in the direction desired.

are carried of every type of glass for modern building construction, from the smallest square of 15-oz. sheet to polished plate up to 170 ins. high and 285 ins. long, and spares for the largest shop fronts in London. Most architects at the mention of "shop fronts" will readily recall "the window of the Empire," the exhibit of the firm at the British Empire Exhibition, 1924. It consisted of a sheet of plate glass 288 ins. long by 168 ins. wide, weighing 1,700 lb., and is believed today to be the biggest achievement ever made in the glass-making industry.

The site of the new depot is practically level, but the northern portion originally formed part of Regent's Canal, and this was reclaimed for the purpose of the building by a system of sheet piling and concrete construction.

The main structure is of reinforced concrete. It comprises a small basement, ground, first and second floors; and on the flat roof above is a caretaker's cottage. The floors were specially designed to carry heavy loads of glass, the heaviest sheets, plate glass, etc., being accommodated on the ground floor. The first floor has an open end forming a dock which, together with the ground-floor dock, is served by a travelling crane for loading and unloading direct from the lorries, which draw into a yard occupying the whole of the frontage to Eagle Wharf Road. In the eastern half of the ground floor are two travelling cranes which run the whole length of the warehouse from north to south. In addition, a goods lift serves all floors. The offices, for which the architects designed all the furniture, occupy the north-west corner of the warehouse.

The most spectacular feature of the building is the "sucker," concerning which the following story was told recently by Sir Basil Clarke in *The Liverpool Express*: "An American traveller walked into the St. Helens works not long ago to show them the 'newest thing ever invented' for the delicate task of picking up big sheets of plate glass. It was a queer-looking frame of vacuum rubber rings which fixed themselves on to the flat surface of the glass like the suckers of an octopus and held on by suction while cranes pulled the frame in any direction wanted. They would be forced to buy it, he said, for once seen, it could not be done without. They said nothing (Lancashire fashion), gave him a good luncheon (again Lancashire fashion), and then took him into the works and showed him an appliance just like his—*at work!* He gazed open-mouthed. It had been at work there for years. They had quietly invented the machine themselves and put it into practice long before the idea had ever reached America." In the photograph on this page the sucker is carrying a sheet 203 ins. by 161 ins.

The sucker, however, is not the only innovation. The motor lorries of the firm are fitted with an ingenious side frame made to take extreme sizes for delivering the glass to its destination.

In the construction of the warehouse the fire-resisting glazing is of the new Georgian wired type and the essential windows in the offices are in Vita glass — all the products of Messrs. Pilkington Bros.

THE FORUM CINEMA, LIVERPOOL

DESIGNED BY WILLIAM R. GLEN

THE Forum, Liverpool's latest cinema, has been erected on a slightly sloping site at the corner of Lime Street and Elliott Street, having a frontage to the former of about 150 ft. by an average depth of 75 ft. A steel-framed building, founded on solid rock, and faced with Portland stone, its erection occupied some fifty men for ten months and involved the use of a million bricks and 48,000 cubic feet of stone. It is roofed with hollow concrete blocks, finished with asphalt. Over 1,800 persons are accommodated.

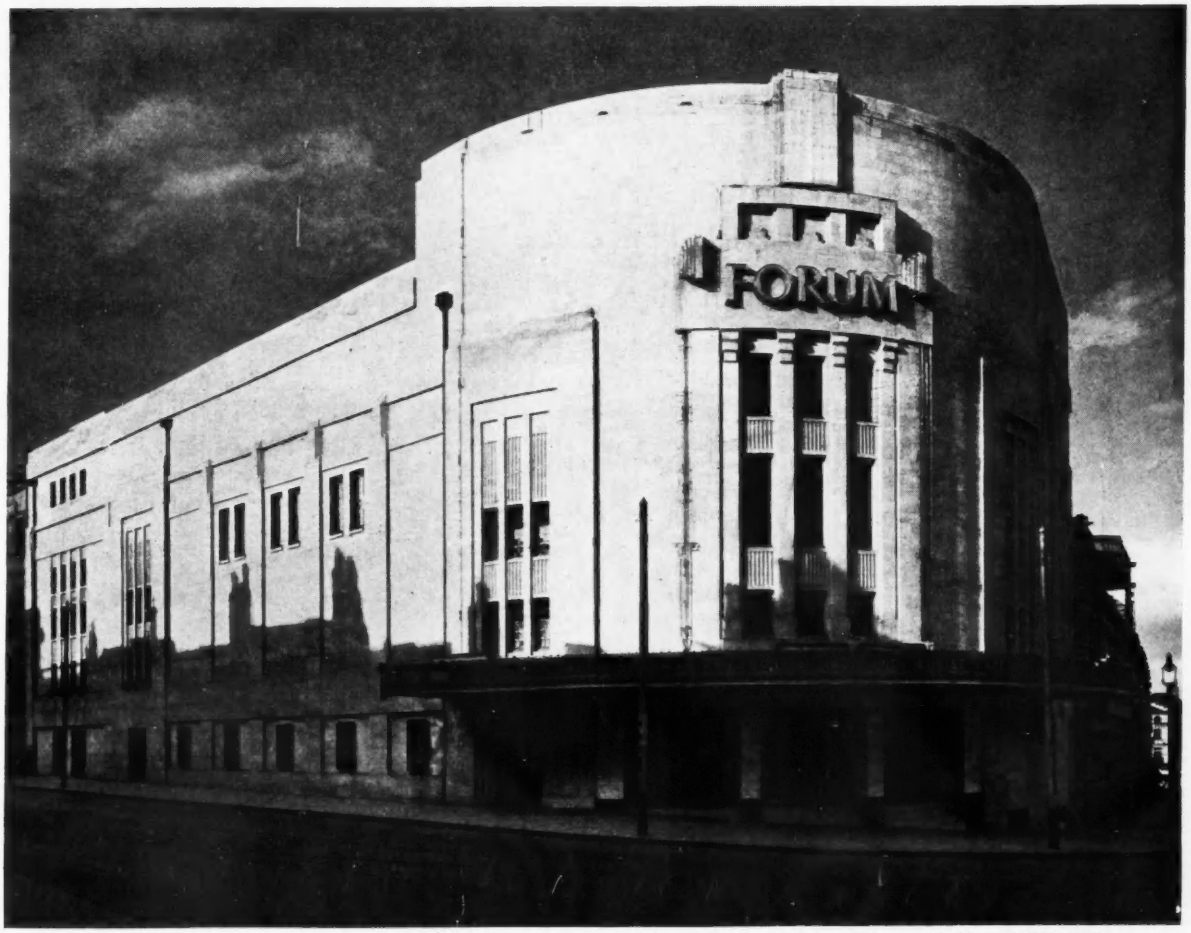
The position, at a busy traffic junction, influenced the planning. It was desired to avoid any clash with the authorities on the question of theatre queues interfering with street traffic: hence the layout includes ample indoor waiting spaces for the accommodation of intending patrons—in the basement, on the mezzanine floor, and on the balcony floor, where there is also a tea lounge. Moreover, the rounding off of the street corner, where the main entrance doors are placed, has resulted in an access of pavement space, while a canopy shelters people actually entering or leaving the house.

On passing one of the four pairs of inner doors, visitors find themselves in a spacious entrance vestibule, paved in Tinos and white marble. Almost opposite are flights of stairs, leading upwards and downwards to the balcony and basement waiting spaces. On the left are two pairs of double doors, leading direct on to the main floor of the auditorium.

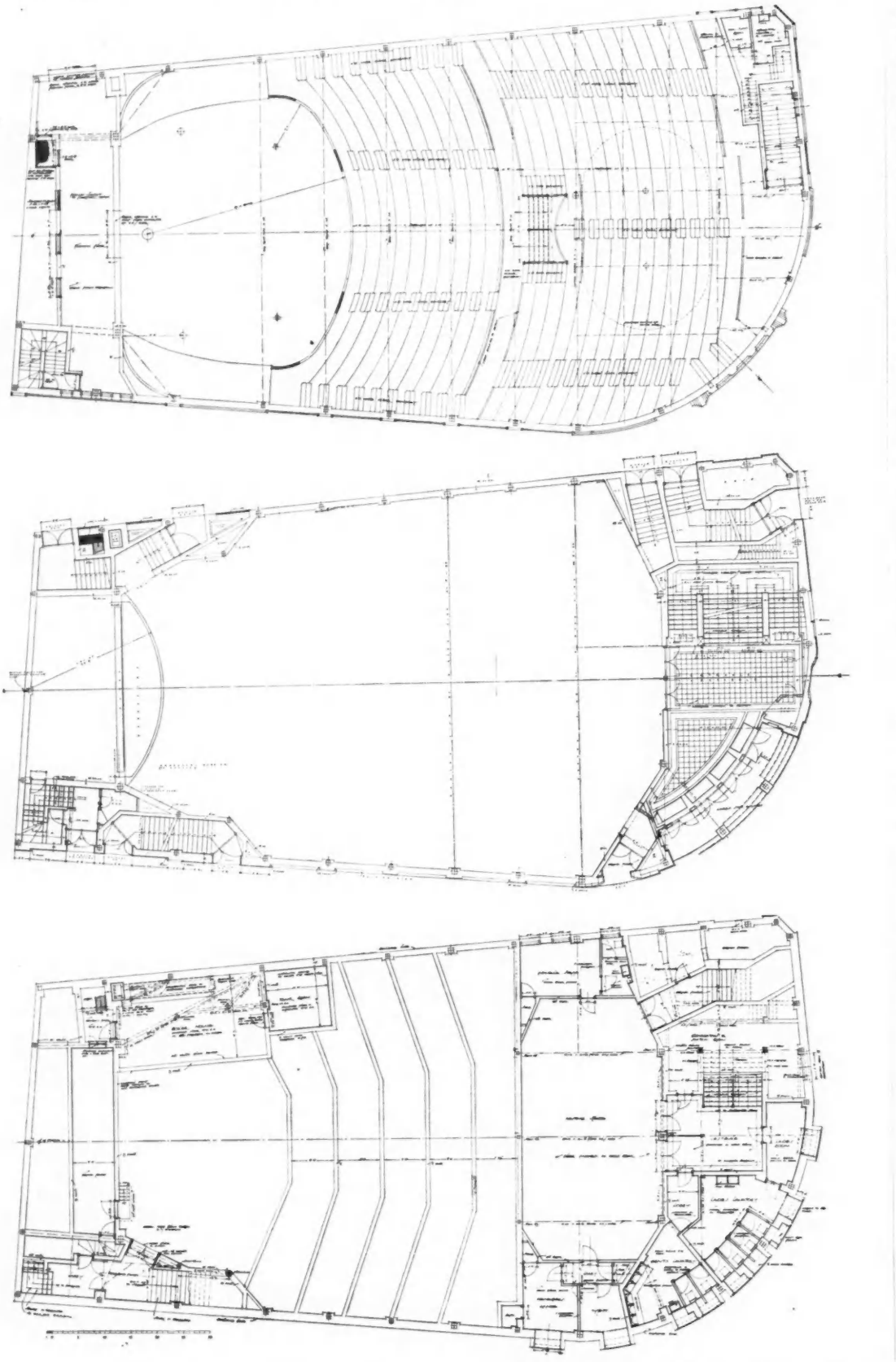
Within, golden tones prevail, graduating upwards to the main ceiling, which is finished in pastel blue tones, and has a central sunburst and radiating ribs, and forwards towards the proscenium, where lighter tones—of silver and of mother-of-pearl—are introduced. The sunburst gives an amber light, and so do trough lights concealed behind the cornice. Two electric glass and mirror fountains, contained in recessed panels on either side of the stage, supply the high lights in a shadowless lighting scheme. As usual, there is automatic apparatus for the blending and changing of coloured flood-lights, which in this instance play about the proscenium arch.

There is also very complete equipment for stage lighting—two three-colour battens and a footlight. The back stage setting is of deep Naples blue, throwing up the silk folding curtains, with their delicate-shaded panels and large tassels, which tone with the auditorium decorative scheme.

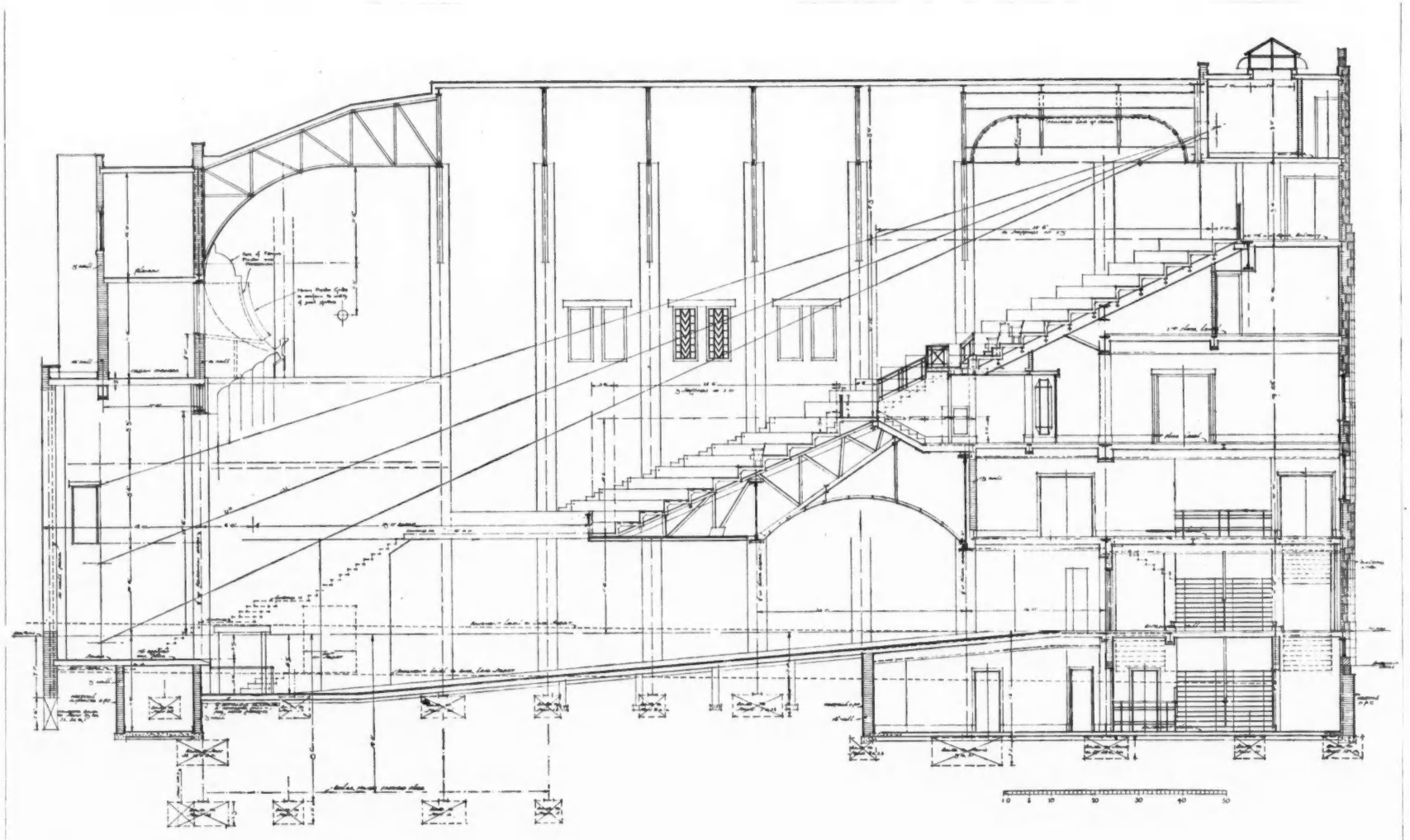
The projection room is eloquent of up-to-date practice, having walls of grey glazed tiles, with all switchboard and other electrical panels recessed, and a floor of parquet. But the planning throughout is a model of modernity.



A general view of the exterior, showing the main entrance on the curved corner of Lime Street (left) and Elliott Street. It is a steel-framed building, faced with Portland stone, occupying a site some 150 ft. by 75 ft.; the canopy is of bronze.

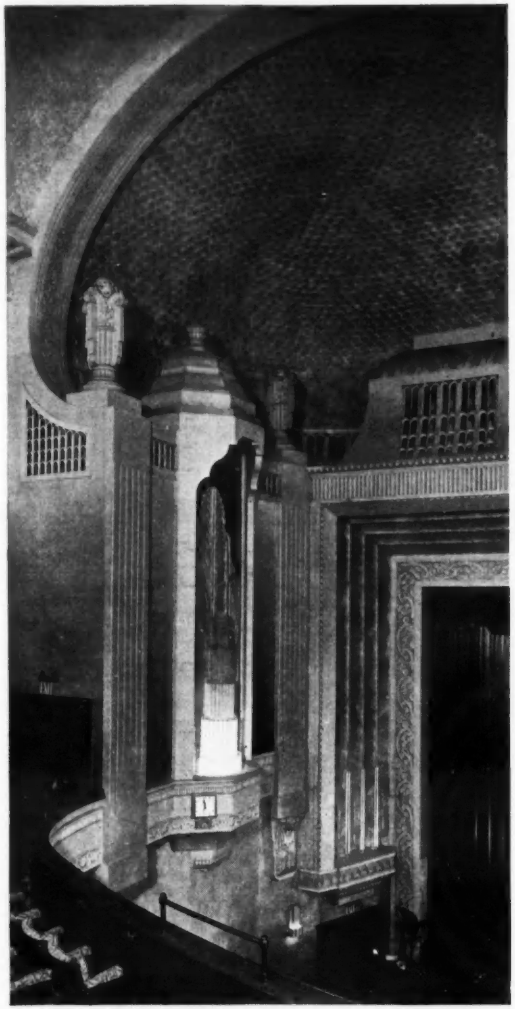


The basement, entrance and balcony floor plans. The first indicates the sleeper walls carrying the load of the main auditorium floor, and the large waiting space. The balcony has a large capacity in proportion to the site area, and this and the ground floor accommodate, together, 1,842 persons. The seats are at 20-inch centres and are 24 ins. deep.



The Forum Cinema, Liverpool.] [*By William R. Glen.*

A longitudinal section on the centre-line of the auditorium. There is a considerable rake to the ground floor, and a steeper one to the balcony: the angle of depression of the projection rays, as indicated on the central of the three sight lines, is 21°, and the throw is 136 feet. The organ chamber is above the stage, and the coved construction, springing from the proscenium arch, is clearly shown. Above the rear part of the balcony, coving also gives additional ceiling height. The large amount of space allocated to waiting rooms for incoming patrons adds to their comfort, but was, in fact, of prime importance to avoid any possibility of congestion arising from crowds collecting on the pavement outside the building at an exceptionally busy corner. The plans indicate how carefully the questions of easy entrance and exit, and circulation within the building, have been considered. It will be noticed that windows are provided in both side walls so that cleaning of the house can take place in natural and germ-destroying conditions.

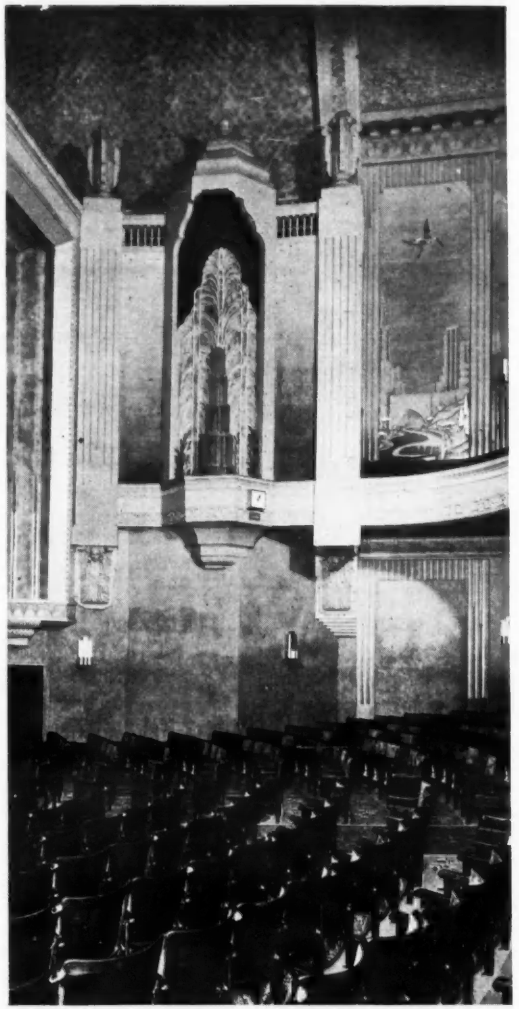


One side of the proscenium, seen from the balcony. Over the architrave is the organ grille; other grilles are fitted for ventilation. The coved modelled plaster ceiling is treated with pale tints of blue, pink and silver, and, illuminated by concealed trough lighting, produces an effect of mother-of-pearl. Behind the mirrored glass electric lighting fountain the modelled panel is similarly decorated. The warm gold and pastel colours predominant in the house thus take on, at the stage end, a lighter, silvery tone.

The entrance vestibule, with stairs leading up and down to waiting-rooms; and the café on the balcony floor, which has 40 tables and is decorated in a colour-scheme of golden brown.

THE FORUM CINEMA, LIVERPOOL

By William R. Glen



The side of the auditorium, in proximity to the stage, from ground-floor level. The colour-scheme is graduated upwards, from the carpet, with light-brown ground and brightly coloured patterns, to the old ivory cornice. The skirting is black, the dado a deep gold-brown, with honey shades above. The wall panels are of Venetian subjects. The main ceiling is of stippled plaster, tinted pastel blue; it has a sunburst as central feature, and is further embellished with radiating ribs modelled in fibrous plaster.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : ix

TRIALS OF A CLERK OF WORKS

BY KARSHISH

(H. B. CRESWELL)

MY difficulties as Clerk of Works were mainly of my own making, and arose from my involving everyone in my perplexities. No man properly knows anything until he has done it himself; nor at all understands any kind of craft until he has, at least, closely observed another at work. Thomas Huxley—as readers of the fine biography by his son, Leonard Huxley, will recall—never accepted the authority of any investigator, but informed himself by actual dissection; and the same principle is true in building.

What, for instance, does anyone know of cast and wrought iron, and cast and forged steel, until he has seen them broken, bent and torn asunder, and has examined the fractures? An hour's demonstration by an intelligent bricklayer will give a knowledge of bricklaying that a fortnight's study of books will not do—or a lifetime's for that matter; and the case is stronger for the more highly-skilled crafts. To be informed by books is to have merely a rote knowledge which gives little more power to think—to have, that is, a mind's eye and a clear imaginative perception—than is possessed by the creature which most closely rivals that accomplishment, namely, the parrot. Nothing but assimilated knowledge counts for much in the world—except the passing of examinations in order to teach others to pass them for the purpose of coaching others to the same end and for the same purpose; and assimilated knowledge, which approaches perfect or intuitive knowledge, can only be gained by intimacy with materials and craft methods.

If any youthful aspirant to architectural practice doubts this, he may speedily dispel that doubt by accompanying any architect of undoubted attainments when he visits one of his jobs. It was only after many years that I came to understand this matter, and I here give it a paragraph as a direction post that would have greatly succoured me when, at Brayness, I first began to discover it for myself.

My job was to get the Post Office properly built with sound materials and workmanship according to the full intent and meaning of the drawings and specification; but although the Bradshaws were strictly conscientious according to their lights, the fact that I knew myself powerless to prevent them from deceiving me led me to fear they would do so.

How was I, who regarded bricks merely as bricks, to know how hard hard bricks ought to be; or what constituted their being well burnt, square, true, and uniform in size? How was I to know whether they were free from those unspecified "other defects"; and whether they were free from lime? I could only settle these and other questions by cross-examining the unlucky Bradshaws and by meeting their every assurance by new objections until they had found answers to every suspicion my imagination could conjure; and, as I had an active one, unhampered by any practical knowledge, their patience and ingenuity were severely tested. If I did not ask them to satisfy me that the sun would not melt the bricks nor rain dissolve them, it was only because those dangers did not occur to me, for I should certainly have done so if they had.

The matter that gave me the most tortured perplexity was, however, the ground stone lime and the Portland cement. The fact that both were of a well-known brand did not weigh with the Clerk of Works: they were materials for the building, and it was his duty to see they were the best of their respective kinds; and he discovered that both had such serious defects as to be probably unsuitable for any purpose of building whatever, and certainly wholly unsuitable for the alterations and additions to Brayness Post Office. This startling fact was revealed by certain textbooks on building materials which I had luckily brought with me.

The cement passed the test for fineness imposed by the meshes of a cook's sieve of appropriate gauge bought for fivepence at a chandler's shop, but passed without distinction. It almost satisfied the test for weight on the Post Office letter scales, after tormented calculations of the due weight of one-eighth of a pint and of the number of pins to the half ounce; but when mixed with water and the grout filled into a medicine bottle, the bottle became warm—evidence of *heating!* And, after the grout had set, its level in the neck of the bottle seemed, to acute perception, higher—proving that the cement *swelled!* When similar grout was poured on to a bit of glass and allowed to set (in the air), the edge of the cake showed cracks—showing that it also *shrank!*

Of the stone lime, I can only say that it proved more dissolute and unmannerly than the cement. When, however, I laid my bottles and mud pies in ceremonial evidence before Father, he first stared as though he did not know what I was talking about, and then, when I pointed out that both the cement and lime were defective, he laughed with a deep, silent, throbbing convulsion of the belly that shook his whole body. His uncontrollable merriment did more to put me out of countenance with my doubts than his assurances did—convincing though they were.

"Well, sir, you beat all I ever heard," he said, wiping his eyes after he had sat to recover himself. "You must excuse me laughing so, but I've used Milson's cement thirty years, and their lime too, and you couldn't get better. Why, they used Milson's down in the river when they put in the new swing bridge two years ago. You must expect a bit of heat in cement until it's air-slacked, and this is new out of the bags. I never heard tell of bottles and bits of glass before, but you couldn't ask for anything to set harder, could you, now? Milson's ground stone lime sets pretty near as hard as their cement. Do you know, sir, I used that lime, five-and-one, in those cottages I built six years ago down Merlington Avenue, and they're so hard as rocks." And he began laughing again.

It might be supposed that, with my textbooks, the experience of the builder, and the acute observation of the foreman—as already recounted—to guide me, I should have been informed of what was what in stone lime and cement; but each of these authorities stood on different ground, and, by discrediting both the others without directly challenging them, threw confusion upon the issue I sought, so that I retired to the position of frustration I have ever since occupied; for though I have since enforced air-slacking and installed testing machines on some of my jobs, I should to this day never use lime or cement of an origin or make that did not guarantee its quality. In this I have taken Father's position, which I proved, by care-worn daily notes of the setting of concrete and mortar in Brayness Post Office, to be a sound one.

It will be seen that the difficulties in carrying out the work under my supervision were considerable; they might well have been insuperable but for the tactful roguery of Joe Richards, the foreman. He had various methods of reducing my obstruction. His most deadly was by a gesture of acquiescence; and I learnt to take alarm when, instead of replying to the cross-

questioning by which I sought to arrive at decision, he said, "All right, sir," cheerfully tossed his hand up to his hat-brim, and glided away with smooth, effortless strides to give effect to my wishes; for it was a trick of his to make a futile pretence of beginning the work and then come to me, turn up his inscrutable face to mine and ask, innocently, "And what do you want me to tell 'em to take and do now, sir?" When, however, he wished to reconcile me to what was already done, he had recourse to that understanding insight and sympathy which is the source of all true humour, and which, in this humble workman, has always seemed to me to be not merely a wonderful, but even an exquisite thing.

The method employed by the Office of Works was that which is now established in American practice: the specification and contract drawings gave complete and full particulars of every detail of the building—even to the adapting and extending of counters and fittings in the public office—so that no further drawings or instructions were, from first to last, needed. It happened, however, that the postmaster clamoured so unceasingly for access to the roofs and flats in the rear of the building that Tallard sent me a brief specification of a dormer in which a door from the demolished building was to be hung. It was no part of my duty to improve on Tallard's instructions; the thing was duly fashioned with all the baldness of the bald instructions, and the result, as seen from some of the back windows was, to the fastidious architectural eye, dreadful. A huge, leaded dormer, roofed as with a lid, and with vast cheeks each bearing a great raw solder dot like the bull's-eye of a rifle range, jutted out from a low-pitched slated roof which it completely dominated. I was looking at the thing with deep dissatisfaction when Richards came up. I made no remark, and scarcely knew he was at my side, when his cheery-singing voice sounded in my ear:

"Looks like some stoopid old woman, don't it, sir?"

This sticks in my mind as the most discerning bit of architectural criticism I ever heard. It was complete—for nothing added could improve it; and it was perfect—for it was vivid and exactly true. I doubt whether the writings of Mr. Howard Robertson or Mr. Frederick Towndrow or Mr. Trystan Edwards, or of any other modern analysts of architecture, furnish a more trenchant image. The dormer exactly expressed the exasperating futility of a stoopid old woman, and it was precisely in the measure that it did so that it provoked disgust as a design.

My shame at being associated with this dormer was forgotten when Richards made me laugh at it; and this device of ridicule was at his service on occasions when I had ructions with Father. One of my duties was to certify to Tallard the weekly sheets showing the men's time and the materials expended on certain bits of extra work which were authorized. Father was apt to grow restive at my questionings of the hours charged—for the money involved was of no sort of consequence in relation to the contract sum—and one day he burst out in a spluttering rage, and told me, roundly, that if too much time had been charged he would sack the men concerned, and that that was the long and short of it and the last he had to say, so now he had told me and I could do what I liked—and he walked off.

The trouble was about a wretched little bit of cutting away in a man-hole, by a bricklayer. I objected to a labourer's time being also charged, for, to my knowledge, no labourer had been concerned. Father's threat was merely one of reprisal: it settled nothing; for, though it might silence me, the men were not to blame, and, if they had been, it was impossible for me to countenance their dismissal. My sense of duty would, however, have made me hang on like a bulldog if a threepenny-bit only had been in dispute; but Richards put all right with a word. Directly Father was beyond range, he sang out:

"Don't you know, sir, that a bricklayer *can't* work unless he's got a labourer a-standing by a-looking at him?"

The dispute instantly took its right proportions and was dismissed in laughter; and, I may add that I was illuminated, for a considerable experience of building has persuaded me that Richards was right.

Richards used different methods in dealing with Father: he never allowed his whimsicality to peep out in the presence of his employer, nor was his serious, dutiful air ever, on those occasions, lightened by a touch of humour. He took matters serenely into his own charge and did the thing that was wise and tactful in his master's interests, and I never observed him to get into trouble for thus over-riding instructions: his divergences were either not noticed or, if noticed, they were unquestioned. There came an occasion, already alluded to, when the last straw was added to Father's burdens and his back broken: he mutinied and point-blank refused to do what I told him; and I then had good reason to be grateful for the wise intervention of his foreman.

It happened—in the confusion of pulling down and rebuilding piecemeal—with temporary screens and gangways everywhere, and the postal workers crawling like dispossessed ants over everything, and snow on the sorting tables and dust in the Morse machines, and the postmaster inarticulate with indignation—that both Richards and I overlooked a step which was shown on the drawings at a door that opened from the front to the back premises, with the consequence that Richards levelled through from a wrong datum, and foundation work in rough bricks from the demolition was carried up two or three courses above the due level of a paved and enclosed yard that there was at the back. Luckily for me, but unluckily for Father, I noticed the mistake before, in my opinion, it was too late to put things right. Father, however, held a contrary opinion, for the facings were up four or five courses, and some 15 ft. run of wall was involved.

"Oh, well," said he, lightly, "Richards will just take and put a bit of a cement skirting round to cover up and make a job."

A cement skirting round the yard would, on several counts, no doubt have made a better finish of wall to paving than was provided by the contract; but I had not enough experience to perceive the fact, and should have held that I had no authority to sanction the variation, if I had.

"The drawings show the facings going down to the level of the paving," I said.

"Well, sir, but it's been and done now, ain't it? It's too late to alter. We shall have to take and do the best we can."

"I have no power to order any variations. I have to see that the contract is carried out."

"Well, that's what we expect, sir! So you have been doing. You saw what we were at; why didn't you check us if you weren't satisfied?"

"But that's what I'm doing now!"

"After the work's been and done, sir! And then ask us to pull it down to please you! I never had a job with all these objections there has been here. It don't seem we can give satisfaction however hard we try. If you will say what you want before we put it in hand, we'll do all that's in reason, as we have been ever since the start; but if you don't know what's got to be done why—how are we to know? Come, that's fair, ain't it?"

"You've got the drawings and specification and . . ."

"I'm sick and tired of hearing of the drawings and specification, sir! If you don't know what's in the drawings and specification, how the blazes are we to know! *Now* then!"

"I'm here to see the contract properly carried out."

"And so you are doing; as you'd never hope to see a contract better carried out. What's wrong I can't see;

but you're never satisfied from one day's end to the next."

"The work has got to be done right."

"And so it is being done right! You got him check the levelling to your bench, didn't you?" he turned to Richards.

"Yes, sir," Richards sang out.

"Well, now, that flat beats anything I ever heard tell of in all my experience! You good as take and tell my foreman to build one way, and when he's done it you expect us to pull down and do it another way to suit."

"The contract says——"

"Damn the contract! How the hell are we to know what's in the contract if you don't? I'm fair fed up with the job! I'm sick and tired of the everlasting piddling little objections and interferences. I've had enough. Richards has took and done what you told him to do, and as you haven't accepted my offer to give you a cement skirting free and for nothing, why, I'll have an order for an extra whether I'm to pull down or to run the skirting. I won't do a hand's turn till I get an order for extra, and the work can stand till I get it. That's flat! So now you know, sir! That's the last I've got to say."

"Then Mr. Tallard . . ."

"Let Mr. Tallard come down and see how things are for himself. I'm ready, sir. I'm not afraid of Mr. Tallard finding fault with my work." And poor Father, greatly heated and trembling with agitation, walked off the site, with Mr. George silently following on his heels, leaving Richards and me standing.

I was greatly distressed at the intensity of Father's feelings, filled with remorse at having so provoked the honest man, and overcome with the feeling that he had far better grounds for his indignation with me than I had for any dissatisfaction with him. The idea of calling upon Tallard to enforce my authority hurt my vanity, and also impressed me as the act of a school "sneak," so that I was sorely tempted to retract and persuade Father to run his bit of skirting to cover up, and to chance the discrepancy being noticed by Tallard, or, if noticed, objected to. On the other hand, I felt the humiliation of conceding to violence what I had denied to reason. These thoughts absorbed me as I stood in a stunned silence while Father and Mr. George went off, when I was called to life by Richards whistling piercingly on his fingers, at my elbow. This particular whistle was his signal when he wanted the attention of his men. These stopped work, and Richards then waved his arm and shouted instructions somewhat as follows:

"George! Bilks! Young Dick along! Right down: two below damp course; whole length! Look sharp!" Then, turning to me, he said, as he glided away: "That'll be all right, sir."

Sure enough, by the end of the day the faulty work had been pulled down and in great part rebuilt. The cost was probably no more than the proposed skirting would have been; but that point was a small matter beside the ending of a dispute that would have dislocated the work, given ground for future quarrels, and perhaps established bitterness and a sense of grievance. Richards prevented that misery, for he understood the souls of men as well as their bricks and their mortar; and the result of the upset was that I became more alive to the interests of the builder, and the builder more patient—if that were possible—of the shortcomings of the Clerk of Works.

NEXT WEEK: X—A NEW FIELD OF VENTURE

The previous instalments appeared as follows:

May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.
July 15. viii: Joe Richards: Foreman.

LETTERS FROM READERS

Morecambe's Fall from Grace

SIR,—Astragal, in his criticism of this town, has evidently only a superficial knowledge of it. One feels there is need for a few remarks on, and corrections of, his cold comments.

First, please allow the place its correct name — Morecambe and Heysham. Then, to the best of my knowledge and belief, the plan of the new town hall was not designed by the borough engineer. This official, like so many of his brethren, has two or three architectural assistants, and it may be fairly presumed these men are responsible for the plans of the building. Astragal has not struck quite the right note here; methinks he would have done the profession a service if he had expressed in strong terms the need for architectural assistants in municipal service to be allowed to append their signatures to the plans for which they are responsible, instead of the engineer's name being applied to all and sundry drawings, as obtains so often at this present.

Whilst I agree with all your contributor has said respecting the L.M.S. hotel, and admit there are monotonous streets and streets of boarding-houses of cheerless elevation, let me say we do possess some buildings which, if not worthy of great encomiums, must be lifted above the common level described as "dull in the extreme and oft-times definitely ugly." Sir, believe me, there are in this seaside resort quite a few churches of good taste, a bank or two of dignified appearance, an extension to post office of architectural merit, with the adjoining building of "the town's newspaper," a fair example of a modern commercial building. In domestic work too (despite the very flourishing and evident energies of the speculative builder), one can find a few quiet and dignified homes.

Morecambe and Heysham certainly is ambitious, and there is a growing desire for an improvement architecturally as in every other direction. The town is much above the doleful spot Astragal would have readers believe, and the action of the Corporation in calling upon outside architects (who are also involved in certain large and progressive municipal schemes here) to design elevations and interiors of the town hall is surely a tribute to private practitioners.

RICHARD DOBSON

The Decay of Craftsmanship

SIR,—As a reader and subscriber of the JOURNAL since its early days as *The Builders' Journal*, I protest in the strongest possible language against the impudent accusation, in the grossly ignorant article in "News and Topics" in your issue for July 1, on the "Decay in Craftsmanship."

The charge laid against teachers in technical schools is entirely false in its premises and, being void of any constructive idea or suggestion, is not acceptable as a piece of normal criticism. As one who has engaged in teaching for over thirty years in different parts of the kingdom, and having had a first-class practical training, and also taken a leading hand in the training of a very large number of "practical men" as teachers, I can testify to the sound guidance for traditional and progressively scientific craftsmanship which is encouraged through the courses of study to be followed over four or five sessions by the young entrants to the building industry.

The writer of the article is evidently enviously jealous of the "practical man." I, therefore, commend that he should closely study the excellent and most truthful serial by Karshish, now given in the JOURNAL. If he is satisfied with Whistlow's form of training to fill a post charged with the onerous "practical duties" of clerk of works, he is to be sympathised with, and much pitied.

Whistlow is more truthful when he magnanimously states that the practical man " is the salt of this earth."

The system of building education is still far from perfect, and many of us well know of the uphill work still to be done for students and for teachers; but of this we must rest assured: the door must be kept wide open for the " practical man " to enter the teaching profession; otherwise, as has happened in other phases of educational effort, the work will become artificial and untruthful. We cannot safely leave " practice " to pure " theorists," and especially to artists. Practice and theory are truly inseparable.

If it can be shown that the whole scheme of building education, which includes architecture, requires in England generally to be overhauled thoroughly, and its control and direction economically unified in proper institutions under teachers who are practically experienced and qualified for their respective forms of work, then we shall realize what to many of us has long been a dream and a desire.

During the past few decades our industry has been of the most progressive with regard to the adoption of new materials and new methods, and I most strongly emphasize that the institution where the properties of the new materials, and the principles to be used in proper construction, can best be taught is the school; the knowledge cannot be gained in the modern workshop, or in the office.

E. HOLDEN

Lowest Tenders

SIR,—Referring to the letter of " Suburban Builder," an architect acts only as agent for the building owner in such matters, but I agree that architects should make all reasonable inquiries as to the suitability of contractors to carry out a contract before inviting them to tender, and that, unless there is some unusual circumstance making such a course inadvisable, the lowest tender received should then be recommended for acceptance.

In the case of works for public authorities, where a general invitation to tender is advertised, the architect may sometimes be justified in recommending the acceptance of a tender which may not be the lowest.

H. F. T.

SIR,—I am generally in sympathy with the views expressed by " Suburban Builder " in his letter. As a general rule, the client makes his own selection of builders for tendering, and frequently has a man or firm for whom he has preference. Often a client does not realize that it is unfair to include any contractor in such a list if there is any intention of setting him aside when his price is actually the lowest.

I invariably advise clients to accept the lowest tender or to toss up in the event of a tie, but, unfortunately, I am not always able to get them to concur.

J. LEIGHTON FOURACRE

SIR,—They say on-lookers see most of the game. That is possibly why all your correspondents on the subject of tenders so far have missed what is to me, neither a builder nor an architect, a perfectly obvious point.

If I am buying an article—for instance, a car—I select a few models that suit me, and get full particulars of performance, price, etc. Then I say to myself: " The Slumber Six is £50 more than the Moonbeam Midget, but it is definitely a rather better car. Is it worth the extra £50 ? "

In choosing a builder, I am not buying an article, but I am buying service and workmanship—qualities which naturally vary with the firm I select. Though all the contractors who have been asked to tender are capable of doing the job decently, obviously some are better than others. If the lowest tender is not from one of the best builders, I have to consider whether the extra outlay involved in going to the best builder will be justified by the superior workmanship I expect to get. Surely in building, as in all other directions, I must buy on the principle of value for money, and not that of getting the cheapest article I can.

Apart from this, other considerations often come in, such as the time required by the builder for finishing the job. I imagine that for buildings in Central London a difference of two months in the contract time is worth a difference of hundreds of pounds in the tender.

MAN OF AFFAIRS

SIR,—" Suburban Builder " desires to add yet another law to an already overburdened statute book.

In the course of nearly forty years' practice I have only once advised a client to accept a higher tender than the lowest, and in that case the lowest tenderer was so far below my own estimate that I considered it impossible for him to carry out the work without loss.

Should a client of mine desire to employ a particular builder, I find no difficulty in fixing a contract with him at a fair price, without competition.

I do not think that any architect of repute would invite tenders merely as a check, or allow a competitor to reduce his tender after hearing the result.

ARTHUR H. OUGH

SIR,—I quite agree with the points raised by " Suburban Builder " in his letter with regard to the practice of accepting tenders which are not the lowest in competition—that is, when the tenders have been obtained by invitation. Personally, I always impress on clients that, if a builder is invited to tender and his tender is the lowest submitted, they are morally bound not to pass him over in favour of anyone else. I may say that I cannot recollect any case under my direction where the lowest tender has been passed over in favour of a higher one, although the temptation is very great sometimes, when tenders are very close and some particular builder is preferred.

In cases of open tendering, when tenders are advertised for—as, for instance, in the case of public work—I do not consider that the lowest tender should necessarily be accepted, as probably one is not familiar with the capabilities or reputation of all the builders tendering—nor should I recommend the acceptance of a tender which is very much below the next or average of the tenders submitted, as probably there is some bad mistake in the pricing of the bill of quantities.

G. BERKELEY WILLS

Inglesham Church

SIR,—The ravages committed in the way of " restoration " in hundreds of old churches are but too often lamentable; but, quite lately, I came across this particular church, and in my limited experience it appears to be unique, as from its state I imagine that nothing has been done to it for quite 150 years. The oak-framed box pews are grey with age, and there are two screens almost falling to pieces, which appear to have been highly decorated in colour — and there are other interesting features.

Inglesham is at the extreme N.E. boundary of Wiltshire, and within about a mile of Lechlade (Gloucester).

Do any of your readers know anything of it ?

A. SAXON SNELL

The I.A.A.S.

SIR,—Referring to the Payne *v.* Marshall case, perhaps Mr. Athoe will be good enough to tell us if a builder who keeps draughtsmen is eligible for Fellowship of the I.A.A.S.?

Also what proportion of architect members were articled or passed through a recognized school ?

Also are house agents, factors, borough engineers and sanitary inspectors eligible ?

WILLIAM DAVIDSON

SCHOOL WORK: LIVERPOOL

For " commercial," in Mr. W. Dougill's critique, page 87, July 15 issue, " communal " should have appeared. The change of sense is regretted.

THE SPECIFICATION WRITER

Some Concrete Appliances from Abroad

THE increasing use of concrete construction in modern work has led to the introduction of special appliances, which the specification writer should be prepared to call to his aid, both for the heavy structural work and for the finishing. While many of these novelties are in use in this country, others already familiar abroad seem to be little known.

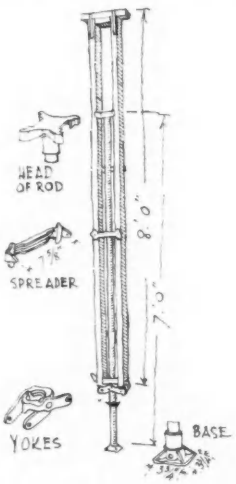


Figure one. Sketches illustrating the construction and use of the Rooshor, an appliance taking the place and functions of timber shores. It is very strong, adjustable, and capable of being used repeatedly.

The Rooshor (figure one) does away with the old method of shoring with posts and wedges under the form work and shuttering of concrete floors and beams. A concrete-filled steel rod is fitted with a shoe and fixed to run between two pieces of timber, these latter being connected at the top by a T-shaped head. To the lower end of these timbers is attached a special form of steel yoke, through which the rod runs freely in a downward direction, but which grips it firmly as soon as any pressure is put upon the timbers from above. To erect the Rooshor the foot of the rod is placed on the ground vertically under the point to be supported; the workman then lifts the wood frame until the head is in contact with the shuttering above. The yoke holds the shore automatically in this position, and a final tightening-up is done with a small hand-jack. The whole operation can be carried out by one man with great rapidity. To dismount the shore all that is needed is a sharp blow with a hammer on the yoke.

The saving in time over the old method is great, and an even greater saving in cost is effected, as these shores can be used over and over again, being suitable for any height up to 14 ft. By the addition of an extension piece, even greater heights can be supported without any wasteful cutting of timbers. The shores when closed are about 7 ft. long and pack closely together for storage and transport, thus forming a very economical item in a builder's plant. The Rooshor will bear a considerable load when fully extended. A test made at the University of Pennsylvania showed that under a weight of 11,850 lb. the shore began to deflect, but regained its alignment when the load was released. The maker's claim that each shore can support a safe load of 3,000 lb. gives an ample margin of safety.

Another standardized apparatus for the shuttering of reinforced concrete and cased steel columns also comes from America. This is a binding clamp (figure two) made of metal strips hinged together, which open to an angle of 90 degrees. Two of these strips form a clamp, and each arm is perforated with a number of slots. A running link, to which is attached a wedge, runs over the arms and connects them together round the shuttering, so that the size of the pier is of no consequence as the arms can be adapted either for large or small without cutting and fixing. To release the clamps a light upward blow with a hammer is all that is needed, and they can then be folded up for re-use. In a column about 12 ft. high the lowest clamp should be within 12 ins. of the bottom, the next three spaced 18 ins. apart, and the remainder approximately 24 ins., with the topmost one within 6 ins. of the head. For a higher column the lower clamps should be closer in order to withstand the greater pressure of the liquid when first poured. These clamps are manufactured in various lengths to hold the shuttering of oblong as well as square piers, and there is also an ingenious arrangement, with a rod and lug attachment, whereby the shuttering can be secured when a pier is built close against an existing wall.

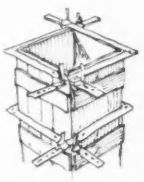


Figure two. An American binding clamp.

While dealing with shuttering it should not be forgotten that there are other materials besides common planking. Masonite has a substance which is much lighter and as effective, when strengthened by battens, for all forms of vertical shuttering. The material has also the advantage of being perfectly smooth, and when removed it leaves the face of the concrete without the impression of the grain of wood boards, so that no rendering is necessary before decorating.

In many countries concrete sleepers have been adopted on the railways, but among the various drawbacks to their use—the perfect concrete sleeper, capable of resisting the complicated strains set up by a train, has yet to be designed—one of the worst is the difficulty of fixing the rails or chairs to the concrete. The common method of embedding some form of wood plug in the sleeper, and driving into it the rail spike, is unsatisfactory, as the plugs invariably become loose in time from vibration or from heat. A novel method (figure three), which is also suitable for the holding down of any heavy machine subject to vibration, is to thread a greased spiral on a spike about 6 ins. long and bed this in the concrete when the sleeper is being cast. After the material has set, the spike is unscrewed, leaving the thread alone firmly fixed in the block. The hole is then lined with bitumen, and a permanent holding-down bolt of a similar thread is first dipped in boiling pitch and then screwed in. This method has been adopted by the Italian State Railways and is apparently a success.

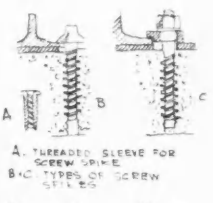


Figure three. Device for holding down bolts in concrete sleepers.

The reinforcing of concrete strong-room walls is another problem. Bricks are fire- but not burglar-proof, and even concrete walls, constructed in the usual manner with steel rods, can be cut through with little difficulty by means of the oxy-acetylene blowlamp.

A recent invention which has been adopted in some Continental banks consists of a reinforcement of twisted steel bars (figure four) composed of two metals, the exterior coat being mild steel, while the centre of the bar is composed of an anti-blowpipe metal. These bars are placed about 3 ins. apart vertically in a double or treble row in the thickness of the concrete wall.

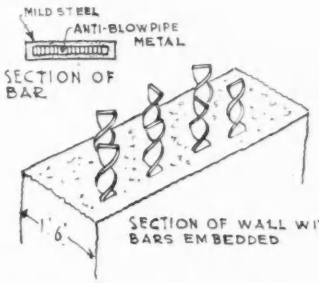


Figure four. A twisted bi-metal, anti-blowpipe form of reinforcement for strong rooms.

The twisting of the rod, which exposes the edge as much as the side to the blowlamp, as well as the nature of the inner metal, which dissipates the heat, will be more than a match for a cracksman, who nowadays cannot look forward to long undisturbed periods of work.

Another gadget comes from Germany. This is the Ancobar (figure five),

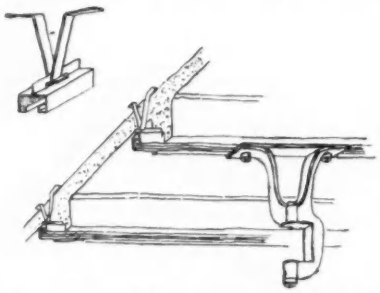


Figure five. The Ancobar, a German device for fixing overhead shafting, etc.

manufactured by the Deutsche Kahneisen Gesellschaft, and it consists of a hollow steel rectangular tube with a flanged slit running down the length of the underside. These bars take the fixing for overhead machinery and transmission gear shafting. The old method required that the engineer should set out all his machinery before the factory was completed, so that the various rag bolts could be built in, and frequently when the floors were clear of scaffolding a better scheme was apparent which could not be adopted without expensive cutting and punching of holes in floors and beams. With the Ancobar the exact position of the machinery need not be settled till the building work is complete. The Ancobar tubes are embedded in the underside of the concrete beams, the lower face of the bar flush with the soffit. They are incorporated in the reinforcement by means of a series of steel straps with hooked ends extending upwards at intervals into the mass of the beam. Care should be taken when pouring the concrete not to fill the slit in the Ancobar, although a small amount of cement is easily cleared out when the shuttering is struck. The main Ancobars extend from pier to pier in the manner of the common reinforcing rods, and are manufactured in various sizes, those of the largest section being capable of supporting a weight of over two tons per foot run. Ancobars let into the floors of machine-rooms allow power units to be moved from place to place without the dreaded dislocation of business usually associated in the factory owner's mind with " calling in the builder."

LL. E. W.

PHOTO-REPRODUCTION OF PLANS

Some Modern High-Speed Methods

MODERN architectural practice tends to the multiplication of drawings and at the same time demands an ever-increasing speed in their production. If at times one regrets the spacious days of careful tracings and meticulously-coloured details, it is abundantly clear that in this high-speed age no architect or engineer can carry on without the aid of photographic reproduction. Many of the processes carried out at Messrs. B. J. Hall's new premises at Stourton House, Dacre Street, Westminster, S.W., are familiar up to a point, but unless the many improvements that have been made during the last few years are fully realized, time is frequently wasted in the drawing office over doing by hand much that can be carried out more quickly and economically by the machine.

The Ordoverax process, besides copying tracings in the ordinary way, can also be used for making alterations without retracing the whole sheet. The portions of the drawing to be revised are blocked out on the composition table, and a print taken on tracing cloth. This is returned to the architect, who then makes the necessary alterations in the empty spaces, and, from the tracing thus completed any number of copies can subsequently be taken, either by the Ordoverax or other processes. Dirty tracings can be made to give clear black-and-white reproductions, the blemishes being removed from the etched surface of the composition before inking with the roller. It is realized that the opacity rather than the thickness of the line is of importance; good inked reproductions either on tracing cloth or on paper can be made from pencil originals on to transparent detail paper or Stirling pencil cloth.

Speed in the wet process of blue printing is regulated by the rapidity with which the prints can be washed and dried, and sometimes the white line and dark surface of a blue print is considered objectionable. To meet the demand for greater speed and to give a positive result from a positive original, Messrs. Hall have introduced the Coralin and Ilex processes, which are developed in a small machine at the rate of about ten feet per minute and require no washing. Prints made by these processes can be developed entirely without trays or machinery, by just sponging the surface with a pad impregnated with developer. As the prints dry the lines grow darker and, there being no fear of offsetting, they can be rolled up and dispatched with safety before becoming bone dry.

The speed of exposure is taken care of by the Hall-Mark copier, which makes use of a patent horizontal lamp and distributes the light with great accuracy, so that in conjunction with the copier the Coralin and Ilex processes offer the most rapid means of plan-reproduction known.

The maximum size of a finished sheet by the usual type of reproducing cameras used is 18 ins. by 24 ins., and anything larger had formerly to be done on separate sheets and joined together. By the Radioscript process it is possible to make prints up to 40 ins. by 50 ins. in one piece, and the studio in which this work is carried out resembles a miniature Hollywood, with floodlights and batteries of powerful lamps to give perfect illumination for the enormous camera, which focuses by travelling backwards and forwards on a pair of rails. The direct Radioscript produces negative copies in white lines on a black background, but by the indirect method a positive from any opaque original can be reproduced as a positive.

In an adjoining dark room, by means of a camera with a mercury-vapour lamp, copies of drawings can be made in facsimile or to any required scale, and can be printed, if required, on translucent celluloid as a negative for obtaining prints by other processes. Thus a set of $\frac{1}{8}$-in. scale drawings can be reduced to $\frac{1}{16}$-in. scale in the time it would take a draughtsman to sharpen his pencils. It is perhaps not generally known that an opaque drawing can be transparentized and copies taken from it in a similar manner as from tracings.

The lithographic process is worked on two machines in the basement, where everything is as clean and twinkling as the engine room of a warship. This process is similar in result to Ordoverax, but can be economically employed only for a sufficiently large number of copies to make the preparation of the necessary zinc plate worth while.

Among many interesting fittings and instruments exhibited in the showrooms on the ground floor is a drawing table and stool which seem to have forestalled every possible criticism of the most finicky draughtsman. The table can be adjusted to various heights and to any angle, under the control of a single foot pedal. The height of the stool is adjustable—the draughtsman does not need to leave his seat when wishing to elevate or reduce the height of his position. Indeed, everything is there except the Robot draughtsman himself, with his self-filling fountain drawing pen. But Messrs. B. J. Hall have an experimental department, and we may yet see these invented.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigation may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.

Crown Copyright Reserved.

Failure of Roofing Tiles

AN architect wished to know the cause of the failure of clay roofing tiles which had been laid on a roof about three years ago, and now show distinct signs of disintegration at the edges. The pitch of the roof is 40°, and it is fully torched on the underside with haired mortar. The failure of the tiles is confined to one slope having a north-west aspect.

From an examination of specimens of the tiles it is apparent that they are of rather a poor quality, distinct signs of lamination being evident in all. This and the appearance of the damage, together with the fact that disintegration had occurred on the north-west side of the roof, make it practically certain that failure was due to the action of frost. This side of the roof would probably dry out less rapidly than the others, since the heat of the sun would only reach it late in the day when the temperature is already somewhat low. Thus, conditions tending to keep the tiles saturated would arise and freezing would easily cause failure. In this connection it is interesting to note that on an experimental roof at this Station, the deterioration of some tiles having a northern aspect is much more marked than that of similar tiles having a southern aspect.

The practice of torching is considered to lead to an increased danger of penetration of moisture and, in so far as it provides an additional reservoir of moisture in capillary contact with the tiles, it is probable that failure by frost action will be accelerated.

Failure of Cement Renderings on Salty Bricks

A contractor complained of the continual breakdown of a cement and sand rendering applied over brickwork, and asked if the Building Research Station could suggest the cause and any possible cure. It appeared that the renderings first developed hollow areas and ultimately cracked and fell off, the face of the brickwork exposed being covered with a white material of pasty consistence. Rendering with cement and sand had again been carried out on the affected areas, but a similar type of failure had occurred.

From the specimens submitted it appears that the bricks contain a very high proportion of calcium sulphate, and for this reason Portland cement rendering would be expected to fail where moisture conditions in the brickwork are favourable to the conveyance of the salt to the rendering. It is very doubtful whether it would be possible to renew Portland cement rendering direct on brickwork of this kind. No experimental work has been carried out with aluminous cement rendering over materials containing a high proportion of calcium sulphate, but it is possible that the likelihood of failure would be reduced by its use. If it is decided to try out an aluminous cement rendering, every care should be taken to obtain a dense coating. The sand should be clean and well graded from coarse to fine, an excess of water in the mix avoided, and the work kept moist for several days after application.

An alternative which should ensure complete immunity from further deterioration would be to apply an impervious membrane to the brickwork and then render in Portland cement. A bitumastic paint has been suggested for the purpose, and it has been found possible to apply plasters direct over materials of this kind. It would be possible to ensure a completely satisfactory key by nailing expanded metal lathing to the face of the treated brickwork.

Protection of Concrete from Petrol and Accumulator Acid

Information was required on the effect of petrol on concrete and the most suitable means of protecting concrete from the effects of accumulator acid.

The effect of petrol on the wearing properties of concrete has been investigated at this Station over a period of three months. Concrete specimens were cured in air for one month, and then completely immersed in petrol for a further three months. The amount of wear, measured by a standard abrasion test, was found to be practically the same for concrete which had been placed in petrol as for the control specimens kept in air. Similar results were obtained with specimens cured in water. So far as these tests show, the effect of petrol on concrete is practically negligible.

With regard to the action of accumulator acid, no simple treatment is known which will render the concrete resistant. It is suggested that the portion of the floor over which accumulators are handled should be covered with a good bitumastic composition.

Disintegration of Floors in Bakehouse

A builder requested the opinion of the Station as to the most suitable type of floor for a bakehouse, mentioning that the floor would be subject to high temperatures and considerable trolley traffic. A concrete floor had been laid originally, but had disintegrated under these conditions. A patent composition floor was then laid, but had also failed.

The failure of the concrete and composition floors was probably due to high thermal movements produced by the adjacent ovens. These would tend to develop cracks in any type of monolithic construction, and the rolling of heavy trucks over the surface would aggravate the trouble and lead eventually to the disintegration of the floor. A construction in which separate units are employed is desirable in order that some of the movement caused by the change in temperature may be taken up by the joints.

The materials which appear suitable for this purpose are hard stone or concrete paving flags or bricks, as these are not likely to deteriorate under the effect of the variations in temperature likely to be experienced, and are very resistant to wear when subjected to heavy traffic.

An extremely hard-wearing floor can be obtained with paving bricks, and these would in themselves be quite immune from injury by exposure to very high temperatures.

Attack of Fibrous Wallboards by Rats and Mice

An architect inquired whether fibrous wallboards were particularly liable to attack by rats and mice.

No investigations have been carried out at the Building Research Station in this direction, but the following remarks may be of assistance.

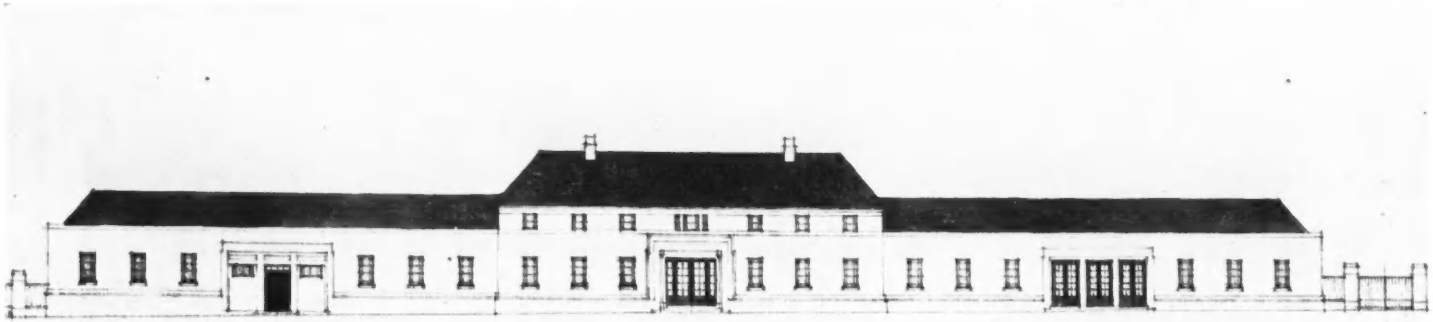
Wallboards have little, if any, food value, and it is unlikely that rodents will be attracted to a building where these materials are employed, unless some other source of food supply is available. The gnawing teeth of rodents grow continuously and have to be rubbed down on some hard material, and it is this tooth-wearing process which accounts for much of the damage caused by rats and mice. If the site is already infested, it is to be expected that some damage will be caused to the boards. The nature of the constituent material of wallboards is such that it might be used by rodents for nesting purposes; it is not, however, likely to be preferred when paper, cloth, or similar materials are within their reach.

It is, of course, well known that the presence of rats and mice is, to a large extent, dependent on the available food supply, and if the source of food is cut off they will be compelled to migrate. If precautions are taken in this direction, we do not see that the use of wallboards is likely to be an important factor governing the presence of rodents in a building.

COMPETITION FOR

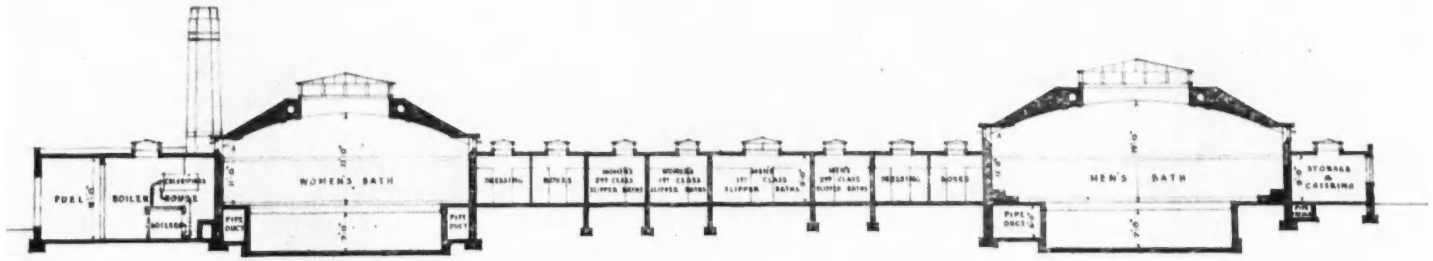
FOLESHILL, COVENTRY, BATHS

Winning Design : By Adshead, Topham & Adshead



. FRONT ELEVATION .

The front elevation to Livingstone Road. The City Council, while not binding the competitors, had in mind an expenditure of £45,000 for the building and equipment, excluding all movable furniture.



SECTION C. C.

Section. Two swimming baths were asked for, with approximately 80 dressing boxes for each, arranged in separate annexes. The men's bath is designed to be used for galas, and in the winter as a public hall with a temporary stage.

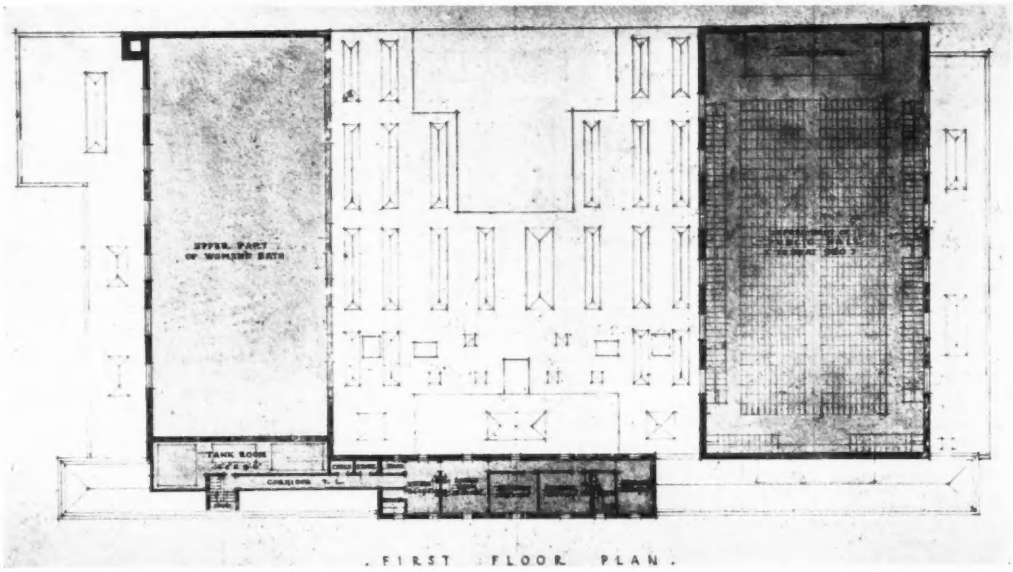
MESSRS. ADSHEAD, TOPHAM AND ADSHEAD, of Manchester, have been awarded the first premium of £210 in the competition, promoted by the Coventry City Council, for designs for branch baths at Foleshill. Mr. Frederick J. Horth, F.R.I.B.A., was the assessor. The second premium (£105) was won by Messrs. Sutton and Burnett, Nottingham, and the third (£52 10s.) by Mr. Arthur G. Porri, London. Seventy-four designs were submitted.

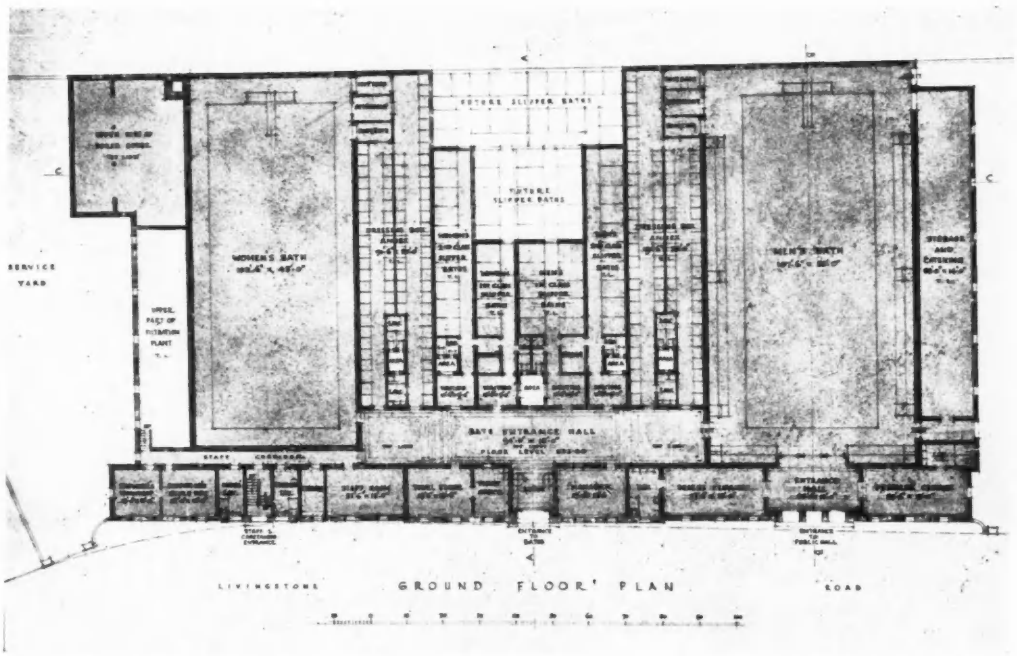
The assessor, in his report, says: "The winning design is one of the most economical submitted, but it will be necessary for the author to exercise care in the choice of materials and strict economy in the drawing up of his specification to keep the building within the amount of his estimate. The general layout, including the engineering services, is excellent, each department being entered direct from the entrance hall, this facilitating easy supervision and control.

"The detail planning is well arranged, but I desire to draw your attention to the following minor points which might with advantage be re-considered:—(a) Position of doors to cloak rooms should allow of a counter along the full length; (b) the top lights to the slipper baths should be increased in width for the purpose of more effective ventilation; (c) the connecting duct between the two baths should be brought in line with that across the front end of the smaller bath hall to afford a direct run from the filtration plant to the shallow end of the larger bath hall; (d) I would suggest that a duct be formed round the fourth side of the large swimming bath to permit of the easy stopping of any "weeping" should this occur in the pond walls.

"The elevation is pleasing and suitable for this type of building, the author relying on sound fenestration and good proportion for architectural effect, the use of ornament having been entirely omitted.

"The response from architects to this competition should be exceedingly gratifying to the Corporation, the standard of design, for an admittedly practical subject, being, on the whole, very good."





Foleshill Baths Competition: Winning Design.] [*By Adshead, Topham and Adshead.*

Plans of the ground and first floors. The slipper baths are planned so that the accommodation may be doubled as a future extension. Other features of the scheme are a boiler-house, engineers' workshop, and store-rooms.

LITERATURE

MODERN DUTCH BUILDINGS

IN these latter days when modern architecture has become an important ingredient of the newspaper paragraph and the very life-blood of the "home beautiful" page, and is even condoned by (some) Royal Academicians, it behoves the serious upholder of sensible building to survey with a jealous eye all that is published in the name of modernism. We therefore turn such a burning eye on Mr. Yerbury's latest work on *Modern Dutch Buildings*, and although we find there a good deal of work which in our opinion is wilful and strives too hard to be expressive, we find very little that seems insincere, a great deal that very well maintains a special quality of Dutchness. As in sixteenth- or seventeenth-century Dutch painting, so in twentieth-century Dutch architecture there exists a remarkable feeling for surface. All the most successful buildings in this book have that. Their windows are like pictures hung on a wall; and they enliven without destroying its surface. Those which, like the offices of the Netherland Trading Company, show their bones and sinews and fail to achieve surface, seem harsh and disagreeable. The "Volkandinj" Co-operative Societies,

building at The Hague is an interesting example of the (almost) all-glass structure, but in looking at it one asks oneself whether it complies with the nursery counsel of perfection on the subject of remarks. Is it true? Is it kind? Is it necessary? That was a hard saying and unduly restrictive of conversation. No doubt it would be so of architecture too, but we do think the question may be asked occasionally, and we are sure that the vigorous architect of this most vigorous composition of contrasting masses would almost persuade us that it was all three. And yet we have a feeling about it and about some others not unlike that experienced by the quiet man in a railway carriage whose fellow-traveller insists on telling him, in dramatic fashion, his whole life history.

But then there is Mr. Dudok to charm us to a smile. His schools at Hilversum account for twelve pages of illustrations and they are the most attractive things in the book. He is a master of happy groupings, his masses are well defined, and whether the buildings are in the streamline manner or roofed over in the archaic manner, they have the same qualities of clearness and graciousness. How happy is he born and bred that goes to school at Hilversum! Mr. Oud is another who has achieved urbanity and character. His housing scheme at The Hook has a quite maritime note. Commercial buildings are represented by the Van Nelle factory at Rotterdam, a magnificent essay in the all-glass manner, and by the silos at the same port—an equally fine structure in the all-concrete manner.

Holland is shaking off both the excessive Frank Lloyd Wright influence, and the too fantastic efforts of the post-war period. There can be no question that her architects are shaping a style that is flexible, interesting and in genuine accord with modern needs and with Dutch culture. That style is so definitely national that we may even hope it will not be copied here.

It is superfluous to say that Mr. Yerbury's photographs are admirable. (See frontispiece to this issue.—ED.A.J.) There are some—but not quite enough—plans, and there is no list of contents nor index. The author's introduction brings out some interesting facts—notably how the speculatively built blocks of flats come by their elevations. But it is not clear whether the architects' remuneration is at the rate of £1 per lineal or per superficial metre. We hope the latter.

Modern Dutch Buildings. By F. R. Yerbury. London: Ernest Benn, Ltd. Price 32s. 6d. net.

A BOOK FOR PLUMBERS, ETC.

I CAN only suppose that a plumber's waistcoat pocket is more accommodating than mine, for having been given this book to review, and finding it described as "waistcoat-pocket size," I inserted it, and felt its pressure all day; it is not a comfortable pocket companion, and, in common with most indecently fat books, after twice opening it, showed a tendency for stray pages to come adrift. It contains, however, all that any decent plumber or sanitary engineer would want in the way of tables and memoranda, and some very useful facts relating to the practice of plumbing, heating, and gasfitters' work. The electricians' section is less convincing, and some of the information as to carbon filament lamps might surely be discarded, while it might reasonably be expected that, as well as the information on Leclanché and dry batteries for bell work, some mention would be made of the method of running domestic bell services by a transformer off the lighting current. To be really up to date some particulars of base-exchange water softeners might also be looked for. E. G.

Tables and Memoranda for Plumbers, Builders, Sanitary and Electrical Engineers, Etc. By J. Wright Clarke. London: B. T. Batsford, Ltd. Price 2s. 6d. net.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Rural Housing

IN Committee of the House of Commons on the Housing (Rural Authorities) Bill last week, several interesting points were raised. On Clause 1 (Government contributions to housing expenses), Sir K. Wood moved an amendment to provide that such contributions should be made in accordance with conditions specified in a schedule. He said that unless some conditions were inserted, the Bill would practically give a blank cheque to the Minister and the committees that were to be set up under the Bill.

Mr. Greenwood, Minister of Health, said that it would be an entirely new precedent in housing finance if the words of the amendment were adopted. There was need for flexibility, because they were dealing with this problem in a new way. In a rich county there was not the same urgency for financial help from the State as there was in a poorer county. He was, however, prepared to move an amendment providing that the Ministry should proceed by Orders, and that such Orders should be laid before the House, thus giving opportunities for debate. The amendment was withdrawn.

Captain Cazalet moved an amendment to provide that the Committee which is to advise the Minister shall consist of not more than twelve persons, of whom at least one shall be a woman, with representatives of the Treasury, County Councils' Association, rural district councils, Chartered Surveyors' Institution, C.P.R.E., industry, commerce, and farm workers. This body, he said, was no packed jury, but a businesslike committee representative of the community.

After discussion, in which Captain Gunston, Miss Lloyd George, Captain Henderson, and Mr. E. D. Simon took part, Mr. Greenwood said he hoped the Committee would not press for the insertion of the amendment, but would leave it to the Government to appoint a Committee, which would be as small as was practicable and as widely representative as possible. The amendment was negatived by 248 votes to 94.

Mr. Hurd moved an amendment to provide that directions as to the cost, size and material of the houses proposed to be built should be included among the directions of the Minister which should guide the Advisory Committee.

Mr. Greenwood said the Committee would determine the size of the houses within the limits of the existing law. As to houses of various types, he saw no reason for having precisely the same number of cubic feet in a house, whatever the means might be. As to cost, last year local authorities built between 7,000 and 8,000 houses, at a cost of less than £300. He had suggested £350 as a reasonable figure. Transport might, however, be an important element of cost. In particular cases the figure might be raised a little. Therefore, he would not wish to see the figure of £350 in the Bill.

After Viscount Wolmer had said that the Minister ought to use his influence with the Committee to prevent the use of building materials which would be an eyesore; Major Owen that as public money was being used, the Minister ought to insist that British building materials were used; and Mr. Womersley had urged that British doors and windows should also be used in the houses, the amendment was negatived by 262 votes to 102.

An amendment by Mr. Albery to the effect that the cost of a financially-assisted house should not exceed £350 was rejected.

Mr. Greenwood moved an agreed amendment providing that any directions or conditions laid down by the Minister under Clause 1 should lie before the House of Commons for twenty-one days.

On the question that Clause 1 stand part of the Bill, Captain Gunston hoped that the Minister would give some indication as to what he proposed to do in regard to the fixing of rents; and Mr. Hurd said that rent was the basis of success or failure, and he hoped that the Minister would keep in mind the figure of 3s. a week.

Mr. Greenwood said that it would be impossible to give a definite undertaking as to rents in all parts of the country, and in all circumstances. He had given a rough estimate of 3s. per house, or 4s. 6d., inclusive of rates. But that was considerably below the rent prevailing for new houses built under post-war schemes.

The clause, as amended, was agreed to, and the Committee Stage concluded.

Underground Dwellings

The problem of the slums was discussed in the House of Lords on the initiative of the Bishop of Southwark, who drew attention to the large number of persons who, in London and elsewhere, were now living in unhealthy underground dwellings, and asked for information as to the number of houses which the local authorities proposed to build in the next five years. He also asked if the Government would appoint a Central Housing Committee to encourage and supervise the building of houses for the working-classes. He said that the Medical Officer to the London County Council had stated that there were about 30,000 basement dwellings in London which were unfit for human occupation, but in which 100,000 people were living. The results to health were deplorable. It was said that continued progress was being made in the closing of basements, but he found that in 1929 only 174 had been closed. His information, in fact, was that the occupation of basements was extending. He asked the Government for legislation to strengthen the existing law if it required to be strengthened, and to make inquiries and publish the results.

Lord Buckmaster's solution for the slum problem was birth control.

Lord Snell, replying for the Government, agreed with the main principle of the speech of the Bishop of Southwark. The slum problem was one of great urgency, but the great difficulty was to rehouse the people, and the closing of a basement did not provide a new site. People would submit to bad living conditions in order that they might live near their work. The Housing Act of 1930 was an earnest of the Government's intention to deal drastically with the whole problem of the slums. Five-year building programmes had already been submitted by 280 local authorities, covering five-eighths of the population of England and Wales, who proposed to build 340,000 houses. In the opinion of the Government it would be unwise to set up a Central Housing Committee. If it meant substituting that Committee for the Housing Department of the Ministry of Health a new and untried body would take the place of an experienced body. If it meant that the Committee should themselves undertake the building of houses, so far-reaching a proposal was open to grave objection. Housing was essentially a matter of local government. The Government were watching the situation. They believed they were reducing the problem of slum clearance to manageable proportions. They did not deny that there was much still to be done.

LAW REPORT

ALLEGED INFRINGEMENT OF A COPYRIGHT OF A GARDEN

ACTION AGAINST BUILDERS

H. Vincent and Son v. *Universal Housing Co., Ltd. Chancery Division. Before Lord Justice Romer*

THIS was an action by H. Vincent and Son, landscape gardeners and builders, of Northwood, Middlesex, against Universal Housing Co., Ltd., of Rickmansworth, for an injunction to restrain infringement of copyright.

Mr. Henn Collins and Mr. Shelley appeared for the plaintiffs and Mr. Jenkins, K.C., and Mr. MacGillivray for the defendants.

Mr. Henn Collins said the defendants were a firm of builders and erected houses of any type, but had a preference for erecting houses of which they issued a catalogue. The plaintiffs received instructions from a Mr. Conant to design a garden for him and thereupon Mr. Ralph Vincent designed a garden, drawing out a plan which was submitted to Mr. Conant. He approved of it, and it was duly made, consisting of terraces and walls, etc.—in fact, an artistic design and a structure, in counsel's submission. This was the subject-matter of plaintiff's copyright. After the garden had been made Mr. Conant had it photographed and he supplied the defendants with a copy or they had one themselves. One of those photographs, said counsel, found its way into the defendants' catalogue, in which the defendants most clearly claimed it as their particular design and construction. The catalogue, and in particular the photograph of the garden in it, met the eye of a Mr. Wilkinson, who put himself into communication with the defendants and ultimately letters passed between the defendants and Mr. Wilkinson, and these came into the possession of the plaintiffs. The plaintiffs now sought an injunction to restrain infringement of copyright of the design of their garden. The garden was finished in the autumn of September, 1929, by the plaintiffs.

The letter in question was written by Mr. Wilkinson to the defendants inquiring the price of the garden illustrated in the catalogue (which plaintiffs said was their garden design taken from another angle). Defendants in their reply enclosed a photograph of the garden and added that it happened to be one of their own design and could be constructed to suit any type of house. Defendants wrote another letter saying that the garden would cost about £237.

Counsel said the garden in question really cost a great deal more than that.

His lordship: What right of action have you?

Mr. Henn Collins: Infringement of copyright.

His lordship: What!

Mr. Henn Collins: It is an architectural work of art.

Counsel added that the plaintiffs drew out a plan of the garden. He stood on the footing that the garden itself was an architectural work of art which was defined in the Act as subject-matter of copyright.

Mr. Jenkins said he did not support the letters which had been written by servants of the defendant company. They were written without authority and should not have been written.

Mr. R. Vincent, of the plaintiff firm, gave evidence in support of counsel's opening. He superintended the work of the garden, which took four months. Defendants had nothing to do with the layout of the garden.

Cross-examined: Plaintiffs objected to the photographs being put in the defendants' catalogue.

For the defence, Mr. Philip Beeson, secretary of the defendant company, said his company took up landscape gardening round about the time the garden in question was made. Defendants got the photograph of the garden in question from Mr. Conant. In fact, Mr. Conant handed defendants the negative. There was a motion in Chancery and as a result the defendants destroyed the catalogues containing the illustration of the garden. Defendants never intended to make another garden like the plaintiffs'. Witness thought that they were entitled to reproduce a similar garden.

Cross-examined: Witness understood that he had given an undertaking not to reproduce the garden and did not intend to reproduce it.

Mr. Richard Sudell, landscape architect, expressed the view that there was nothing new in the plaintiffs' design. Every garden was individualistic in a sense. He had never seen an exact combination like the plaintiffs' garden before.

Mr. Arthur S. Gilhain, landscape architect, thought there was nothing

new or original about the plaintiffs' garden.

JUDGMENT

His lordship, in giving judgment, said this was a ridiculous action and, like most ridiculous actions, raised a considerable point of law. The photograph showed that the garden had features which were common to all gardens, but it contained a combination of features which were novel and of which he had never seen the like before. His lordship thought the letter written by defendants' representative, without authority, was misleading in stating that the design was defendants'. The photograph published was not an infringement of plaintiffs' copyright. The question he had to consider was whether plaintiffs had any copyright in this garden. Was this garden a structure having artistic structure or design? In his lordship's opinion it was. It seemed to him it was impossible to say that it did not possess artistic character or design. It therefore came within the Copyright Act. The defendants had infringed the copyright in offering to construct a garden in accordance with plaintiffs' design.

Under the circumstances, he should order the defendants to give an undertaking that they were not to offer to construct gardens substantially similar to the garden designed by the plaintiffs. As the plaintiffs were largely to blame for all the trouble, he should not give them any costs.

COMPETITIONS OPEN

July 31.—Sending-in day. Proposed Nurses' Home at the Royal Asylum, Montrose. Limited to architects practising in the counties of Aberdeen, Angus, Fife, Kincardine and Perth. Assessor: John Watson, F.R.I.B.A. Premiums: £75, £50 and £25. Conditions, etc., obtainable from C. K. Alexander, Clerk and Treasurer, Royal Asylum, Montrose.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

SOCIETIES AND INSTITUTIONS

R.I.B.A. EXAMINATION RESULTS

THE R.I.B.A. Intermediate Examination qualifying for election as Student R.I.B.A. was held in London from June 5 to June 11, and in Manchester, Newcastle and Edinburgh from June 5 to June 10, 1931.

Of the 226 candidates examined 113 passed and 113 were relegated. The successful candidates are as follows:

Aikman, A. E.
Alp, W.
Armitage, H.
Baddiley, F. O.
Barker, H. M.
Barlow, L.
Beard, P. B.
Beattie, W. H.
Beaumont, M. G.
Beecham, T. W.
Bell, M.
Bennett, H.
Benson, E. S.
Benson, J. F.
Bent, J. A.
Betts, C.
Boothroyd, E.
Bowen, H. A.
Bowman, S. D.
Brooks, A.
Burgis, N. L. S.
Butcher, H. S.
Byram, L. B.
Clarke, E.
Cockett, H.
Cookson, R. E.
Cottrill, A.
Covell, R. G.
Cremer, L. B. H.
Davidson, W. L.
Davies, T. S.
Dawes, S.
Douglas, J. A.
Edwards, L. C.
Evans, C. R.
Fardell, G. C.
Farrow, E.
Firth, E.
Fisk, W. W.
Ford, H. L. J.
Good, W. F.
Greenwood, J.
Gregson, S.
Griffiths, G. D.
Hamnett, V.
Harley-Smith, R.
Harris, L. (Junior)
Hatton, B. E.
Hawkes, J. K.
Hayns, H. H.
Hindle, C.
Hobkinson, G. H.
Hogg, T. W. D.
Jolly, G. J.
Jones, M.
Kaye, D.
Knight, T. W.
Layfield, A. C.
Lindsay, G.
Litherland, R. S.
Mace, F. A.
Margerrison, R.
Marks, L.
Meeson, F. J.
Murrell, H. T.
Nicholson, W. L.
Norfolk, D. E. W.
Pack, E. V.
Paine, R. W.
Palfrey, A.
Parrott, A. T.
Penn, C. de C.
Penny, C. R.
Perry, K.
Pickford, A.
Pilling, H.
Poppleton, W. C.
Raynham, J. E.
Roberts, C. W.
Sanderson, G. S.
Seabright, J. E.
Shannon, J. J.
Shannon, R. P.
Sharman, R. P.
Shelbourn, A. P.
Siggers, R. R.
Smith, J. F. G.
Smith, K. J.
Somerton, G.
Stephens, D. E.
Sterling, A. W. F.
Stevenson, R. W.
Stringer, A. W.
Sturrock, A.
Sudbury, F. T.
Swann, H. G.
Timmons, W. H.
Tindal, Sheila M.
Trustam, W. J.
Upton, H. C.
Waddington, J. R.
Wallace, N. S.
Walters, H.
Ward, G.
Wardley, M. G.
Watkins, F. J. B.
Whincap, B. T.
Williams, A. C.
Winterburn, T. F.
Witham, W. J.
Womersley, J. L.
Wood, J. D.
Wood, L. C.

R.I.B.A. ELECTION OF MEMBERS

At a recent council meeting the following members were elected:

As Hon. Associate

Moore, Lt.-Col. T. C., C.B.E., F.R.G.S., M.P.

As Fellows

Bernton-Benjamin, H.
Gayton, H. J.
Hartley, J.
Hembrow, J.
Jones, M. C.
Liddiatt, E. T.
Lloyd, N., O.B.E., F.S.A.
Logan, Major P. N., O.B.E.
McMillan, Capt. D. S.

As Fellows—cont.

Mitchell, R. M.
Rose, G. A.
Ross, L. H., M.C.
Shenstone, Bt.-Col. G., T.D.
Stewart, J.
Taylor, R. M.
Westrup, G.
Whitaker, H.

As Associates

Challen, Margaret C.
McNicol, W. H., B.A.
O'Rorke, E. B.
Smith, C. H. B.
Thompson, H. R.

As Licentiates

Aldridge, J.
Aldridge, V.
Ashby, L. J.
Barron, A. D.
Boucher, D. G., F.S.I.
Clark, A. N., F.S.I.
Connor, P.
Cormie, M., P.A.S.I.
Dartnell, A. L.
Durant, F. H., P.A.S.I.
Elliott, D., O.B.E.
Fuller, E. H.
Fuller, H. V.
Gardner, W. R. H.
Geeves, E. E.
Hanscomb, J. E. W.
Hassell, A. R.
Hills, R. L.
Hughes, B. E.
Hughes, M. C.
Hume, R. N.
Instance, C. H.
Johnson, W. A.
Jones, H. L.
Kennard, L., F.S.I.
Lewis, A. W. W.
Living, C. (Junr.), F.S.I.
Look, R.
Matthew, J. F.
Mawson, S. A.
Mead, W. J. D.
Milner, A. C.
Panter, P. J. J.
Perrott, L. M.
Rake, F. M.
Reading, A. F. W.
Rees, J. E.
Salisbury, A. G.
Scott, J. R.
Shaw, E. A. H.
Thorpe, A. N.
Todd, W. J. W.
Walters, E. J.
Whitwell, A. W.
Whitwell, W. A.
Whitworth, A. V.

THE ARCHITECTURAL ASSOCIATION

The A.A. School of Architecture annual prize giving was held, on July 10, under the chairmanship of the President, Mr. A. B. Knapp-Fisher, F.R.I.B.A. The prize-winners were as follows:

Public School Entrance Scholarship (value £75 12s.): A. G. Ling (Christ's Hospital School). Open Entrance Scholarship (value £75 12s.): R. R. Wilkins (Eltham College); Honourable Mention: Miss M. A. Trent (Chelsea School of Art).

Renewal of Annual Scholarships: E. V. Tibbitts, J. C. Charter, A. Cooper, R. A. Kirby, R. Wilson.

A.A. Measured Drawings Prize (Books, value £20): Miss J. Balstone, R. G. M. Chase.

A.A. Essay Prize (value £10 10s.): Not awarded. Consolidation prize (value £2 2s.): G. G. Laidler.

"Alec Stanhope Forbes" Prize (for the best colour work during the session, value £5, books): A. G. Savill.

Medal, presented annually by the Société des Architectes Diplômés par le Gouvernement, Paris, to the best Diploma student of the session: A. G. Gibson.

Royal West of England Academy School of Architecture (affiliated with the Architectural Association). (Prize in Design. Value £5 5s.) P. K. Pope.

First Year Course "Howard Colls" Travelling Studentship (value £15 15s.): N. C. Westwood. Second Prize (Books, value £5 5s.): F. C. Keel. Honourable Mentions: V. H. Seymer, R. S. Tubbs.

Second Year Course A.A. Travelling Studentship (value £26 5s.): Miss J. Blanco-White. Second Prize (books, value £10 10s.): M. J. H. Bunney. Honourable Mentions: Miss S. M. Cooper, Miss C. L. Gray, C. J. E. Marshall, H. Tayler.

Third Year Course Holloway Scholarship, tenable for two years (value £250): R. L. Banks. A.A. Travelling Studentship (value £31 10s.): P. E. Cornu. Second Prize (books, value £10 10s.): C. Y. Koh. Honourable Mentions: C. P. Dickinson, E. T. Dowling, Miss C. J. Johnson, R. E. Moira.

Fourth Year Course Year Prize (books, value £10 10s.): Miss M. B. Crowley. Honourable

Mentions: L. A. Drake, E. C. Kent, E. Mayorcas, B. P. Westwood. R.I.B.A. "Henry Jarvis" Scholarship for Construction (value £50): B. P. Westwood. Honourable Mentions: E. C. Kent, E. Mayorcas.

Fifth Year Course A.A. Travelling Studentship (value £50): A. G. Gibson. "Henry Florence" Travelling Studentship (value £50): Miss J. G. Ledeboer. Honourable Mentions: J. R. Atkinson, F. W. Mudd, H. R. M. Walker.

List of First Mention Prizes awarded during session: 1st Year, —; 2nd Year, Miss J. Blanco-White, C. J. E. Marshall; 3rd Year, —; 4th Year, Miss B. Bickerton, L. A. Drake, E. Mayorcas; 5th Year, D. C. McDonald, F. W. Mudd.

A.A. Diplomas awarded since July, 1931: Miss B. A. Blades, I. Forbes, E. Freeth, L. D. Harris, G. Jenkins, R. S. Lavers, R. E. Lee, G. R. Linfield, H. S. Luke, G. F. Nicolls, J. V. Nisbet (Honours—General Work), W. H. Penn, E. Playne, G. F. Randall, J. M. Richards, J. C. Rose, Miss B. Scott, R. D. Scott, Miss K. Veitch, J. C. Wilson.

Mr. Frank Pick, Managing Director of the Underground Group of Railways, presented the prizes. In his address, he said, as an amateur, he looked round him at London, and saw far more experiments in the way of building than London could fairly be asked to bear. All these buildings could not all be right. While it was difficult to apportion praise or blame to any particular building or style, he could not but feel that it was somewhat regrettable that many of them had been constructed in materials that would endure for hundreds of years. Centuries hence, someone might come to explore London, and he would delve about and come across the remains of these various buildings. He would have to interpret these blocks, he would have to reconstruct this London of ours, but he certainly would not be able to reconstruct London satisfactorily, because he would be without a clue to it. The reconstruction of Rome or Athens would be child's play in comparison.

The essential of a school was its collective character; they went to school as a place where something was taught, indeed, as a place where something particular was taught, as in that school, where architecture was taught, and from that notion it was an easy progression to the idea of a school; that was to say, the school ceased to be a building in which they were taught: it became a body of persons taught some particular thing, and that idea of discipline was reflected in another word closely allied—they became disciples of that school. If they carried this idea into a collective body of persons taught architecture, and would remember that they were disciples of this school, then one would find some definite impress placed by the school upon the multiplicity of buildings growing up in London so rapidly. By so doing, we would not find that our buildings were so widely separated in style, or diverse in character; or were in such inharmonious juxtaposition as we find today.

Mr. Howard Robertson, in seconding the vote of thanks, which was proposed by Dr. Raymond Unwin, said that Mr. Pick had given a perfectly sound working creed for any school of architecture. He had perhaps omitted one little thing, and that was the influence of the client on architecture. They had not all clients like Mr. Pick, and buildings were often in the unsatisfactory condition they were, solely because of the distinct instructions of the client, who could not be gainsaid.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Warehouse, Shepherdess Walk, N. (pages 105–108 and supplement). General contractors, Harold Arnold and Son, Ltd. Sub-contractors: S. and E. Collier, Ltd., and Daneshill Brick and Tile Co., bricks, including special size hand-made facings; Pilkington Bros., Ltd., glass; Helliwell & Co., Ltd., patent glazing; J. Jeffreys & Co., Ltd., central heating; Gas Light & Coke Co., gas fixtures; Malcolm and Allan, Ltd., electric wiring; Clark Vigilant Sprinklers, sprinklers; James Gibbons, Ltd., door furniture; Crittall Manufacturing Co., Ltd., casements; Standard Telephones and Cables, Ltd., telephones; A. L. Gibson & Co., Ltd., "Kinnear" rolling shutters; Charles Kerridge, Jnr., office fittings; Smith, Major and Stevens, Ltd., lifts; Royce, Ltd., cranes; Synchronome Co., Ltd., clocks; G. T. Friend, signs.

Forum Theatre, Liverpool (pages 109–112). General contractors, J. A. Milestone and Son, Ltd. Sub-contractors: E. C. Smitton, Ltd., Portland stone; Concrete, Ltd., reinforced concrete; Maclean & Co., metal casements; Shanks & Co., Ltd., sanitary fittings; Robert Adams, door furniture; A. D. Dawnay and Sons, Ltd., steelwork; W. and A. Piercy, Ltd., plumber work; H. H. Martyn & Co., Ltd., decorative plaster; Adams Bros. (Liverpool), Ltd., plain plaster; Chas. Walker & Co., Ltd., marble, terrazzo, etc.; J. Jeffreys & Co., Ltd., heating and ventilation; Barr & Co., vacuum cleaning; Garton and Thorne, Ltd., canopy, metal work, etc.; Permanent Bronzing Syndicate, bronzing; Pearce Sign Works, Neon signs; John Compton Organ Co., Ltd., organ; W. J. Furse & Co., Ltd., organ console lift; Carpets and Curtains, Ltd., carpets, curtains, hangings, etc.; W. Draper & Co., Ltd., electrical work; H. Morris & Co., Ltd., seating; F. H. Pride, electrical fittings; Holophane, Ltd., trough lighting, etc.; Electric Construction Co., motor generators; W. Lusty and Sons, woven fibre furniture in café; General Acoustics, Ltd., Acousticon - Seatphone-System for deaf people.

The photographs of the interior of the Forum Theatre, Liverpool, are reproduced by courtesy of H. H. Martyn & Co., Ltd.

THE ARCHITECTS' DIARY

WEDNESDAY, JULY 22

SIR JOHN SOANE'S MUSEUM, Lincoln's Inn Fields, W.C.2. Exhibition of watercolour drawings by Professor C. R. Cockerell, R.A., representing the buildings of Sir Christopher Wren in a composition dominated by the dome of St. Paul's. Until August 28; except Sunday, Monday and Saturday. 10.30 a.m. to 5 p.m. **10.30 a.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS. Exhibition of Decorative Art to be held at Painters' Hall, Little Trinity Lane, E.C.4. Also July 23. 10 a.m. till 4 p.m. **10 a.m.**

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to St. Mary-le-Bow, Cheapside, E.C.2. Tickets obtainable from the Secretary. **3 p.m.**

THURSDAY, JULY 23

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to new Offices of *Punch*, Bouverie Street, E.C.4. Tickets obtainable from the Secretary. **3 p.m.**

BRITISH MUSEUM, Bloomsbury, W.C.1. Lecture on "Origins of Architecture."—II. (Roman, etc.) **12 noon.**

SATURDAY, JULY 25

Sunrise, 5.11 a.m. Sunset, 9.0 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Luxembourg, visiting Dinant, Lesse Valley, Ardennes Forest and Treves. Return August 4. Full particulars may be obtained from the Secretary.

MONDAY, JULY 27

INSTITUTE OF PUBLIC CLEANSING. International Conference, Guildhall, London. Until July 31.

TUESDAY, JULY 28

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. Visit to Welwyn Garden City. Tickets obtainable from the Secretary. **3 p.m.**

THE BOARD OF EDUCATION. "Pattern." Lecture by Mr. Paul Nash, to be delivered in the Lecture Theatre of the Victoria and Albert Museum. **2.30 p.m.**

WEDNESDAY, JULY 29

THE BOARD OF EDUCATION. "What is Industrial Art?" Discussion to be opened by Mr. F. W. Burrows, H.M.I., at the Victoria and Albert Museum. **2.30 p.m.**

THURSDAY, JULY 30

NATIONAL PORTRAIT GALLERY, St. Martin's Place, W.C.2. Lecture on "Inigo Jones." By John Steegmann, M.A. **3 p.m**

SATURDAY, AUGUST 1

Sunrise, 5.22 a.m. Sunset, 8.50 p.m.

VICTORIA AND ALBERT MUSEUM, Cromwell Road, S.W.7. Lecture on "Ecclesiastical Metalwork." **12 noon.**

MONDAY, AUGUST 3

Bank Holiday.

SATURDAY, AUGUST 8

Sunrise, 5.33 a.m. Sunset, 8.38 p.m.

SATURDAY, AUGUST 15

Sunrise, 5.44 a.m. Sunset, 8.24 p.m.

MONDAY, AUGUST 17

Closing date of THE ARCHITECTS' JOURNAL July Holiday Sketches Competition.

SATURDAY, AUGUST 22

Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

SATURDAY, AUGUST 29

Sunrise, 6.5 a.m. Sunset, 7.55 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1

INTERNATIONAL ILLUMINATION CONGRESS. London, Glasgow, Edinburgh, Sheffield, Buxton, Birmingham and Cambridge. Until September 19.

SATURDAY, SEPTEMBER 5

Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7

SANITARY INSPECTORS' ASSOCIATION, 27 Moreton Street, S.W.1. Annual Conference. Bridlington. Until September 12.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10. Exhibits to reach Secretary on or before Friday, August 14.

FRIDAY, SEPTEMBER 18

NATIONAL SMOKE ABATEMENT SOCIETY, 23 King Street, Manchester. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19

Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

TRADE NOTES

The London office of Messrs. Gent & Co., Ltd., manufacturing electrical engineers, has been moved to 47 Victoria Street, S.W.1.

*

Messrs. John Stubbs and Sons have moved their London office from 32 St. James's Street, S.W.1, to new premises which they have had erected at their works in New Road, London, S.W.8. Telephone No.: Macauley 4514 and 4515. Telegrams: Marbles, Phone, London.

*

The panel system of heating, a British invention covered by British and U.S.A. patents, installed in the new British Embassy at Washington, has attracted widespread attention. So much so that American social leaders are following the example of the embassy. A case in point is the new house for Mrs. William Goadby Loew at East Ninety-third Street, New York, which is to have "panel" heating incorporated in the principal rooms. The embassy is the first building in the United States to be equipped with the system. A curious instance of the interest aroused was provided by one of the big American banking companies, which was so impressed by the economy effected by the system that a description, with the heading "Hidden Heat and, for Some, Hidden Wealth," was given in a series of full-page advertisements. The advertisements paid tribute to the fact that the system was a British invention that had far-reaching possibilities for many American industries.

*

The India Rubber, Gutta Percha and Telegraph Works Co., Ltd., have recently installed at their Silvertown works a new press, illustrated on this page, which is claimed to be the largest of its kind in the world. This latest addition to their plant will mean much saving in time, and higher quality in the production of rubber flooring. The press has a curing surface 30 ft. long by 7 ft. 7 ins. wide. The platens are of polished steel, drilled out for steam heating and water cooling. There are twelve rams supplied with hydraulic pressure and they are capable of exerting a total pressure of 10,000 tons. The press has a daylight of 14 ins. and sheets can be produced with the thickness correct within a tolerance of $\pm$0.004 in. The press table is made of one steel casting and weighs over 34 tons, while the total weight of the press is 260 tons.

*

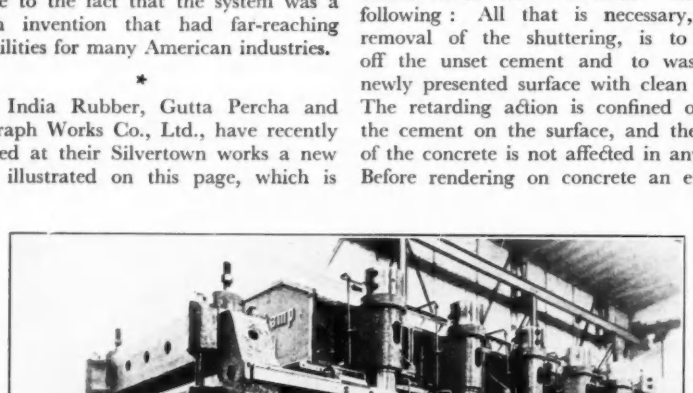
"Retardo," a specially prepared liquid to use for providing a key for rendering or to expose the aggregate in concrete, is the subject of a booklet recently issued by the Cement Marketing Co., Ltd. In explaining how "Retardo" should be used, it is stated that it can be painted on shuttering, moulds, pallets or other surfaces against which freshly made concrete is placed. This liquid, it is claimed, has a retarding action on the setting of cement with which it comes into contact, so that when the shuttering is released the concrete is capable of simple treatment in order to remove the surface film of cement, thus exposing the aggregate. Among other claims made for "Retardo" are the following: All that is necessary, after removal of the shuttering, is to brush off the unset cement and to wash the newly presented surface with clean water. The retarding action is confined only to the cement on the surface, and the body of the concrete is not affected in any way. Before rendering on concrete an efficient key has to be provided. This is usually obtained by hacking the face of the existing concrete. This key is automatically presented, it is also claimed, if "Retardo" is painted on the inside of the shuttering before the concrete is placed.

*

The Silicate Paint Co. are holding an open competition for students, apprentices, operatives or masters of the painting and decorating trades, for decorative designs on panels. The company have issued the following conditions: The panels when finished and mounted by the company, will measure 5 ft. 6 ins. by 2 ft. 3 ins., and are to be vertical, not horizontal. Cartridge paper in roll 6 ft. by 2 ft. 6 ins. will be supplied to competitors on application; such roll to be grounded in Duresco by the company, with any colour selected by the competitor. The design to be carried out on such ground with Duresco supplied by the company direct to the competitor. Five panels will be selected from those sent in, and prizes as follows will be awarded: First, £6 6s.; second, £4 4s.; third, £3 3s.; fourth, £2 2s.; fifth, £1 1s. Such panels will be exhibited at the forthcoming Decorators' Exhibition, to be held by the National Federation of Master Painters and Decorators of England and Wales, at St. George's Drill Hall, Newcastle-on-Tyne, September 23 to October 3, 1931. The following are the assessors: Messrs. L. Drinkwater, B. Phelps, and J. G. E. Holloway, B.A., Editor of *The Decorator*. The finished panels must be delivered to the company at Charlton, S.E.7, by August 31, and will become their property. Entries close on August 1, 1931.

*

As the result of many years' research, a synthetic resin finish, known as "Dulux," has been produced by Nobel Chemical Finishes, Ltd, a subsidiary company of Imperial Chemical Industries, Ltd. There are two types of "Dulux" vehicle, oil and gum, which are claimed to dry fast and show great flexibility. The oil vehicles are used for paints and the gum for enamels. A unique quality of the film obtained with the "Dulux" finish is said to be that it resembles ivory closely in feel and hardness, and that it is particularly suitable for use where fast drying, great hardness and an enamel-like appearance are required; whereas "Dulux" oil finish is used for house decoration. Rigorous tests in busy industrial districts, on the sea coast, and under tropical conditions have, it is claimed, proved that these finishes show unusual elasticity and flexibility, that they are weather-resisting, that the air-drying types are surface dry in about four to six hours, and that the stoving types stove at unusually low temperatures for a short time. They are also claimed to resist the action of heat, alcohol, petrol and oils, and to be extremely resistant to the action of soap and washing compounds. They are obtainable for application by spraying, brushing or dipping.



The new press at the works of the India Rubber, Gutta Percha and Telegraph Works Co., Ltd., claimed to be the largest in the world.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Essex Education Committee is acquiring a site in Lodge Avenue, BARKING, for the erection of a secondary school.

The managers of St. Jude's School, BETHNAL GREEN, have approved plans for structural improvements at the school premises.

The L.C.C recommends a grant of £200,000 to the Court of the London University towards the cost of the erection, on the BLOOMSBURY site, of buildings for the London Day Training College and the Birkbeck College.

The Essex Education Committee is to erect new classrooms at the County High School, BRAINTREE, at a cost of £1,600.

The Essex Education Committee is to purchase land at BUCKHURST HILL for the erection of a boys' secondary school.

The L.C.C. has voted £26,000 for the provision of furniture and equipment for the new technical institute at DEPTFORD.

SOUTHERN COUNTIES

Plans passed by EASTBOURNE Corporation: Parish hall, Victoria Drive, for Messrs. Stonham and Son, on behalf of the Watson Trust; two houses, Willingdon Road, for Messrs. Scales and Baker; three houses, Dacre Street, for Mr. A. Ford; additions, Eastbourne College, Old Wush Road, for Messrs. Tatchell and Wilson; three houses, Park Avenue, for Mr. A. E. Bailey.

The Surrey C.C. is to alter and extend the EPSOM institution at a cost of £8,250.

The Surrey Education Committee has decided to prepare plans for the erection of extensions at the GUILDFORD Grammar School.

The Surrey Education Committee has approved plans for the erection of a boys' secondary school, at Raynes Park, MERTON, at an estimated cost of £46,000.

The Surrey C.C. is to modernize the MORTLAKE Court House at a cost of £1,025.

Plans passed by NORTHFLEET U.D.C.: Two houses, Perry Street, for Mr. A. E. Wells; three houses, Napier Road, for Messrs. Dumbrill and Son; three houses, Perry Street, for Mr. Obee.

The Hampshire Education Committee is to remodel and extend the SOUTH HAYLING school, at a cost of £10,000.

The Surrey Education Committee has acquired a site near TOLWORTH for the erection of an elementary school.

The Surrey Education Committee is to adapt the Knaphill School, WOKING, as a central school, at a cost of £9,635.

SOUTH-WESTERN COUNTIES

The PLYMOUTH Corporation is to obtain fresh plans for the erection of thirty houses and sixteen flats in St. Budeaux.

The PLYMOUTH Watch Committee has approved plans for the provision of a station for public service vehicles and a car park at an estimated cost of £150,000.

Plans passed by the PLYMOUTH Corporation: Eighteen houses, Weston Park Road, for Mr. M. Cohen; ten houses, Cranmere Road, for Messrs. J. Davy and Son; three houses, Stangray Avenue, for Mr. S. Jackson; four houses, Dale Gardens, for Mr. T. Roberts; home, Catherine Street, Devonport, for the Salvation Army; four houses, Beacon Down Avenue, for Messrs. T. Doney & Son; forty-two houses, Ernesettle estate, for Mr. F. J. Stanbury; streets and houses off Trafalgar Road, Stoke, for Stoke Ideal Estates, Ltd.; four houses, Breen Park Road, for Messrs. S. Tellam and Son; ten bungalows, Plaistow Crescent, for Messrs. A. E. Searle and Son; six houses, Furneaux Road, for Mr. C. G. Edgcombe; eight houses, Trelawney Road, for Mr. J. T. Capell; four houses, Elms estate, Devonport, for Mr. W. H. Webb.

MIDLAND COUNTIES

The BIRMINGHAM Corporation is to enlarge the Perry Barr fire station and provide living accommodation for firemen at a cost of £5,500.

The BIRMINGHAM Education Committee is to erect an elementary school on the Weoley Castle estate at a cost of £27,000.

The BIRMINGHAM Education Committee is to remodel the City Education Council school at a cost of £5,500.

The BIRMINGHAM Education Committee recommends the purchase of premises at Towyn, North Wales, for the provision of a summer school to which groups of children from special schools may be sent.

The BIRMINGHAM Corporation is to modernize the Western House Institution at a cost of £46,700.

The DUDLEY Corporation has approved a layout of land in Wolverton Road for the erection of ninety-two houses and twenty-four flats, for the erection of which tenders are to be obtained.

The DUDLEY Corporation has instructed the Borough Engineer to prepare plans for the erection of a municipal common lodging-house.

Plans passed by DUDLEY Corporation: House, Bowling Green Road, for Mr. B. Hubble; mission hall, Hellier Street, for Mr. E. Biggs; house, Cole Street, for Mr. J. Read; machine-shop, 200 High Street, for Messrs. J. Naylor and Son, Ltd.; Sunday school, Chapel Street, for the Primitive Methodist trustees; workshop, Hagley View Road, for Mr. D. Jakeman.

The DUDLEY Corporation has approved plans by Mr. Harvey for alterations and extensions to the municipal buildings.

The DUDLEY Corporation is obtaining tenders for the erection of 186 houses on the Priory estate.

The NORTHAMPTON Corporation has asked the Borough Engineer to prepare plans for the erection of a new meat and fish market.

The NORTHAMPTON Corporation has passed plans prepared by Mr. S. F. Harris, architect, for the erection of a pavilion at the racecourse.

Plans passed by NORTHAMPTON Corporation: Two houses, Enmerdale Road, for Mr. James Collier; two houses, Delapre Crescent, for Messrs. T. Wilson and Son; eight houses, Murray Avenue, for Messrs. Chowns, Ltd.; extensions to club, Cheyne Walk, for the Chamber of Commerce; food warehouse, Ransome Road, for the Northampton Co-operative Society, Ltd.; school, Park Avenue, for the Park Avenue North Baptist School trustees; extensions to mission hall, Lower Hester Street, for the Mission trustees; factory extensions, St. James Street, for Messrs. Wareings, Ltd.; alterations, St. Giles's Church buildings, St. Giles Street, for the Parochial Council.

The NORTHAMPTON Corporation has requested the Borough Engineer to prepare a sewerage scheme for Bants Lane, in view of the contemplated development of the lane for a housing scheme.

NORTHERN COUNTIES

The BIRKENHEAD Corporation has prepared a scheme for a new outfall sewer for the drainage of the southern portion of the town at a cost of £175,000.

The BIRKENHEAD Education Committee is shortly to invite tenders for the extension of the Brassey Street school.

The BIRKENHEAD Education Committee has submitted plans for the erection of a nursery school, St. Paul's Road, to the Board of Education.

Messrs. T. Wainwright and Son are to lay out an estate in the vicinity of Manor Hill, BIRKENHEAD, for Hamilton Estates, Ltd.

Plans passed by BIRKENHEAD Corporation: Presbytery, Gautby Road, for Holy Cross Church trustees; meeting-room, Church of the Holy Name, Beresford Road, for the trustees.

The Ministry of Health has held an inquiry into the proposal of the BIRKENHEAD Corporation for a slum-clearance scheme, involving the construction of a new road, at a cost of £65,000.

The CHESHIRE C.C. is to reconstruct and enlarge the police station in Hazel Grove.

The ECCLES Corporation is to erect a fire station in Liverpool Road.

The ESTON U.D.C. is seeking a grant for the development of the Grangetown Garden Village estate, where the Surveyor reports that 278 houses can be erected.

The HULL Education Committee is to prepare plans for the erection of a second department of the Ainthorpe Grove school to accommodate 400 junior children.

Plans passed at HULL: Three houses, Bricknell Avenue, for Mr. C. Lee; sixteen houses, Ring Road, for Mr. P. Smith; five houses, Hessle-Beverley Road, near Anlaby, for Mr. J. W. Robinson; two houses, Hall Road extension, for Mr. P. Cheeseman; six houses and shops, Endyke Lane, for Mr. J. W. Jordan; sub-station, Municipal Golf Course, Wolfreton Lane, for the City Electrical Engineer; two houses, Boothferry Road, for Messrs. A. H. Evans & Co.; nineteen houses and four shops, Ring Road, for Mr. E. Batty; seven houses, Watt Street, for Mr. J. Needler; nine houses, Marfleet Lane, for Mr. R. Boddy; two houses, Willerby Road, for Mr. F. C. Polley; sixteen houses, Ring Road, for Messrs. Loveridge and Taylor; sixteen houses, Hall Road, for Mrs. Z. Lawrence; eight houses, Wymersley Road, for Mr. R. Cleminshaw; forty-four houses, Hall Road extension, for Mr. S. H. Wrighton; eight houses, Bricknell Avenue, for Mr. A. J. Dalby; three houses, Waldegrave Avenue, for Messrs. Simmonite, Curtis and Holtby; four houses, Cayton Road, for Mr. S. Bays; nineteen houses, James Reckitt Avenue, for Messrs. R. Finch and Sons.

The LEEDS Corporation has passed plans of the proposed new stand, etc., on the grounds of the Leeds Cricket, Football and Athletic Club, Ltd., Headingley.

Sir H. B. Bacon is to erect shops on land at the junction of Harrogate Road and a proposed road north of Gledhow Valley Road, LEEDS.

The LEEDS Corporation has authorized Messrs. Kitson, Parish, Ledgard and Pyman, architects, to make arrangements to resume the pointing of the Temple Newsam Mansion up to a cost of £500.

The LIVERPOOL Education Committee is to erect a secondary school for girls at Fazakerley.

The LIVERPOOL Corporation is to enlarge the Walton hospital, provision being made for new massage and X-ray departments.

The MANCHESTER Corporation is obtaining tenders for the erection of 1,100 houses at Northendon; 550 on the Moston estate; 400 at Blackley; and 120 at Heaton Park.

The MANCHESTER Education Committee is to reconstruct the Hyde Road school, Gorton, at a cost of £7,000.

The MANCHESTER Education Committee is to erect an elementary school at Crowcroft Park, at a cost of £17,000.

The RAWTENSTALL Corporation is to erect thirty-six houses at Ashworth Lane, Waterfoot.

Plans passed by ROTHERHAM Corporation: Four houses, Broom Lane, for Messrs. G. Bolton and Son; house, Wickersley Road, for Mr. H. Illingworth; house, Wickersley Road, for Mr. W. Hayes; development of land, Wickersley Road, for Rotherham Co-operative Society, Ltd.; house, Wortley Road, for Mr. W. Catchpole; house, Masboro' Street, for Mr. O. Tummon.

The SHIPLEY U.D.C. Highways Committee is to remove the weir across the Bradford Beck, in Valley Road, at an estimated cost of £228, as a part of the Valley Road widening and improvement scheme.

Plans passed at SHIPLEY: Two houses, Redburn Road, for Mr. J. Chippindale; ten houses, Wrose Grove, for Messrs. A. and F. Mellor; six houses, High Busy Lane, for Mr. A. Booth.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A	Lichfield ..	Mid. Counties	1 5½	1 1½
A_2	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . . ,,		1	8
Joiner . . . . . ,,		1	8
Machinist . . . . . ,,		1	9
Mason (Banker) . . . . ,,		1	8
,, (Fixer) . . . . ,,		1	9
Plumber . . . . . ,,		1	8
Painter . . . . . ,,		1	7
Paperhanger . . . . ,,		1	8
Glazier . . . . . ,,		1	8
Slater . . . . . ,,		1	8
Scaffolder . . . . . ,,		1	4
Timberman . . . . . ,,		1	4
Navvy . . . . . ,,		1	3
General Labourer . . . . ,,		1	3
Lorryman . . . . . ,,		1	5½
Crane Driver . . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . . ,,	2	10	6
Hydrated Lime . . . . ,,	2	16	0
Portland Cement . . . . ,,	2	6	0
Rapid Hardening Cement . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . . ,,		10	0
Building Sand . . . . ,,		10	6
Washed Sand . . . . ,,		11	6
2" Broken Brick . . . ,,		9	6
¾" ,, ,, . . . ,,		12	6
Pan Breeze . . . . ,,		6	6
Coke Breeze . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . . per F.R.	1	1	1	6
Bends . . . . each	2	10	4	4
Taper bends . . . . ,,	6	3	7	2
Rest bends . . . . ,,	5	9	8	9
Single junctions . . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . . ,,	2	6	3	2
¾" Channel bends . . . ,,	7	8	—	
Channel junctions . . . ,,	7	0	12	6
Channel tapers . . . . ,,	5	6	7	9
Yard gullies . . . . ,,	9	6	11	6
Interceptors . . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . . each	6	0	13	0
Inspection bends . . . ,,	15	3	24	0
Single junctions . . . ,,	9	3	18	0
Double junctions . . . ,,	14	0	27	6
Lead wool . . . . lb.		6	—	
Gaskin . . . . . ,,		5	—	

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . . ,,	8	16	0
,, Bridles . . . ,,	8	0	0
,, Bullnose . . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . . ,,	8	16	0
Midhurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . . ,,	30	0	0
Double Headers . . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R. at Nine Elms:	£	s.	d.
Portland stone, Whitbed . . . F.C.	4	6	
,, ,, Basebed . . . ,,	4	9	
Bath stone . . . . . ,,	2	11	
York stone . . . . . ,,	6	9	
,, Sawn templates . . . ,,	7	6	
,, Paving, 2" . . . . F.S.	1	8	
,, ,, 3" . . . . ,,	2	6	

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchioneases . . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20"×10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1		3
,, African . . ,, ,,	1		1
,, Cuban . . ,, ,,	2		6
Oak, plain American . . ,, ,,	1		0
,, Figured ,, . . ,, ,,	1		3
,, Plain Japanese . . ,, ,,	1		2
,, Figured ,, . . ,, ,,	1		5
,, Austrian wainscot . . ,, ,,	1		6
,, English ,, . . ,, ,,	1		11
Pine, Yellow . . . ,, ,,	1		0
,, Oregon . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,	1		3
,, Burma . . . ,, ,,	1		2
Walnut, American . . . ,, ,,	2		3
,, French . . . ,, ,,	2		3
Whitewood, American . . ,, ,,	1		1
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 1¾" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, 1" . . . ,,		17	6
,, 1¼" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1¼" . . . ,,	1	8	0

Plywood, per ft. sup. Thickness	¼"			⅜"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6			
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6			
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–			
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–			
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–			
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–			

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts: TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40
FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R.	s.	d.	4" s.	d.
		7		1	
Shoes . . . . each	2	3		3	3
Anti-splash shoes . . ,,	5	0		8	6
Boots . . . . ,,	3	3		4	6
Bends . . . . ,,	2	9		4	0
,, with access door . . ,,	—			6	9
Heads . . . . ,,	4	0		5	0
Swan-necks up to 9" offsets . ,,	4	0		6	3
Plinth bends, 4½" to 6" . . ,,	4	0		5	6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5			6
Stop ends . . . . each		6			7
Angles . . . . ,,	1	7		1	11
Obtuse angles . . ,,	2	0		2	6
Outlets . . . . ,,	1	9		2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . . cwt.	19	0
,, drawn pipes . . . . ,,	19	6
,, soil pipe . . . . ,,	22	6
,, scrap . . . . ,,	9	0
Solder, plumbers' . . . . lb.		11
,, fine do. . . . ,,	1	3
Copper, sheet . . . . ,,	1	0
,, tubes . . . . ,,	1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	1
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . ,, lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add	3	0
If in underpinning	"	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
3" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	0
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	15	6
Do. in flashings	"	1	18	0
Do. in covering to turrets, etc.	"	2	5	0
Do. in soakers	"	1	11	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s.	d.	¾" s.	d.	1" s.	d.	1¼" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	6
Do. to stop ends	"		7		9	1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1		3
Extra, only stop ends	Each	1		0
Do. angles	"	1		6
Do. outlets	"	3		0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1		6
Extra, only for shoes	Each	2		6
Do. for plain heads	"	5		6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

EIGHTEENTH-CENTURY MINERS' COTTAGES

MEASURED DRAWINGS OF TWO ROWS AT GUISBOROUGH (CLEVELAND DISTRICT), YORKSHIRE

SEVEN STONE COTTAGES IN BELMANGATE, EAST SIDE

BEFORE the advent of the industrial era, Guisborough, the capital of the Cleveland district of Yorkshire, was a quiet and dignified country town, and in spite of the horrors perpetrated in the boom years of the mining industry in the nineteenth century, there are still evidences that good building was at one time thoroughly understood there.

The photographs on the first and last pages of this Supplement, and the measured drawings within, show two rows of labourers' cottages in Belmangate, a side-road running from the Market Place in a southerly direction to the foot of the Cleveland Hills.

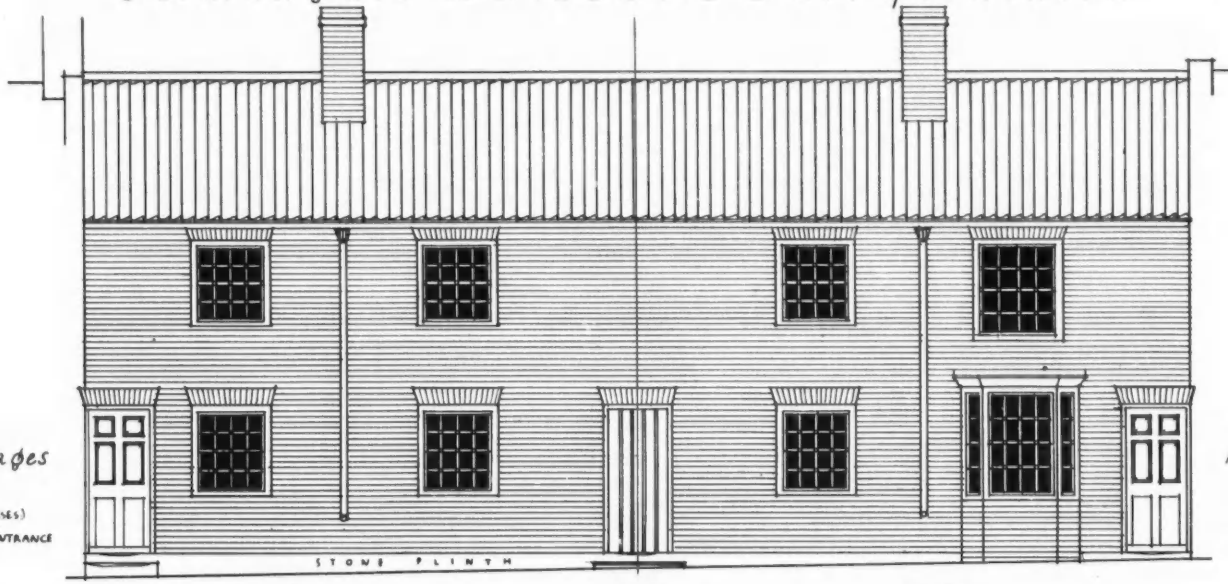
The stone row, on the east side, comprises seven cottages, and was built towards the end of the eighteenth century—a good example of straightforward and unaffected design.

The two doorways with stone architraves (painted a light buff colour, as are all the keystones to doors and windows alike) each lead to a passage from which two cottages are entered—left and right. A single cottage, therefore, has but two windows facing the street and these are of wood, of the traditional Yorkshire sliding type, with enormous stone cills. One of them is fitted with shutters. Originally the whole of the gutters were also of wood, but have unfortunately been replaced with iron as they decayed.

The row on the west side of the road consists of four cottages built slightly earlier, when the use of the local stone was already giving way to brick, and here again the middle cottages are entered from a common passage which gives access also to the back yards of the four. The very charming little bay window, like which there are many in the town obviously by the same hand, is an afterthought in excellent taste.

In both rows it will be seen that the rainwater from the pantiled roofs is allowed to discharge over the generous pavement and find its way to the gutters at the sides of the roadway. In some cases channels have been cut in the stone paving to facilitate this.

Belmangate GUISBOROUGH Yorkshire



ABOVE

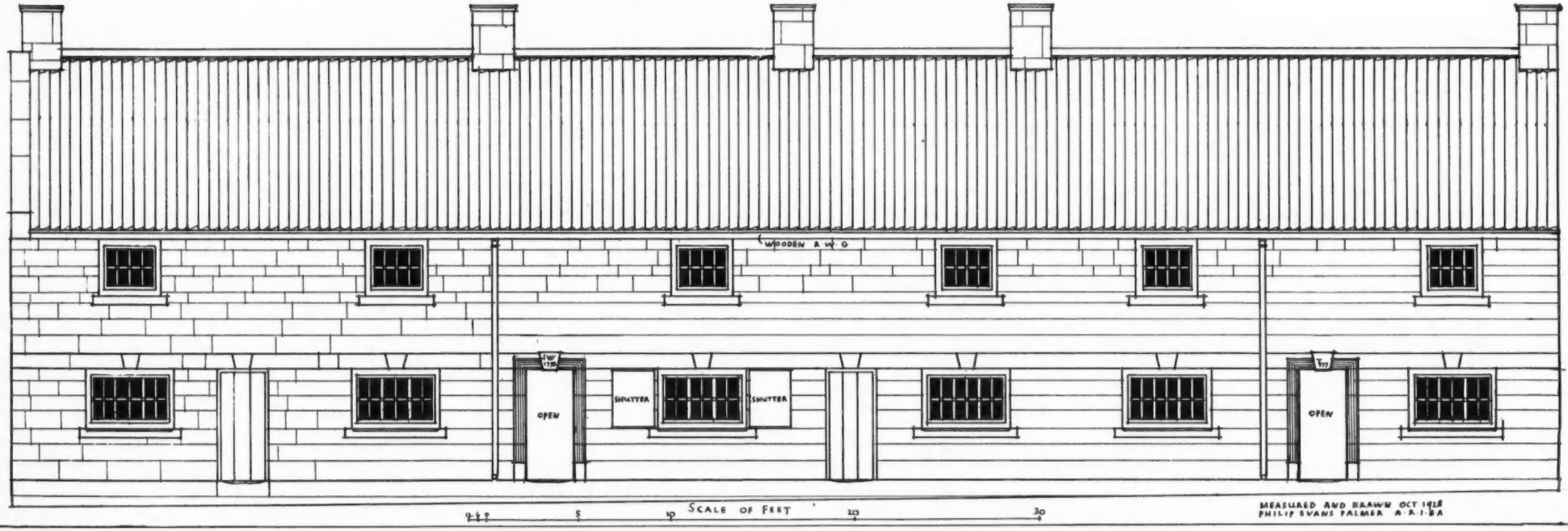
A Row of Four Brick Cottages about 1750

SINGLE HUNG SASHES (TOP LIGHTS FIXED IN ALL CASES) BAY AND SASH OVER ON RIGHT INSERTED LATER. CENTRE DOOR GIVES ACCESS TO COMMON LOBBY ENTRANCE

BELOW

A Row of Six Stone Cottages dated 1778

YORKSHIRE SLIDING CASEMENTS THROUGHOUT AND WOODEN RAINWATER GUTTER. IRON DOWNPIPES ... OPENINGS GIVE ACCESS TO 2 COTTAGE ENTRANCES EACH



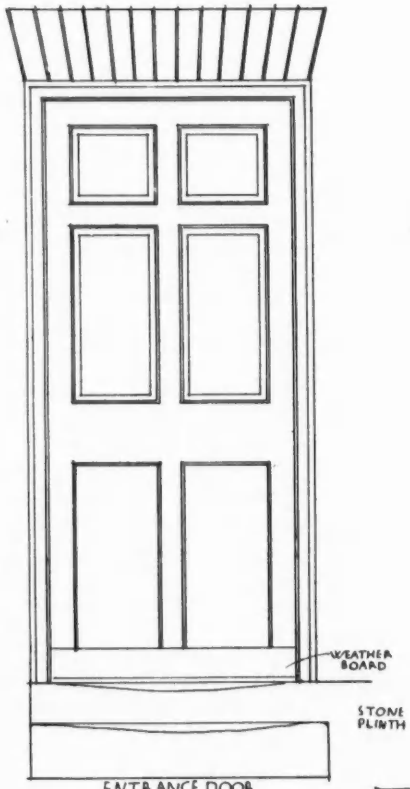
MEASURED AND DRAWN OCT 1928
PHILIP EVANS PALMER A.R.I.B.A.

SCALE OF FEET 0 5 10 20 30

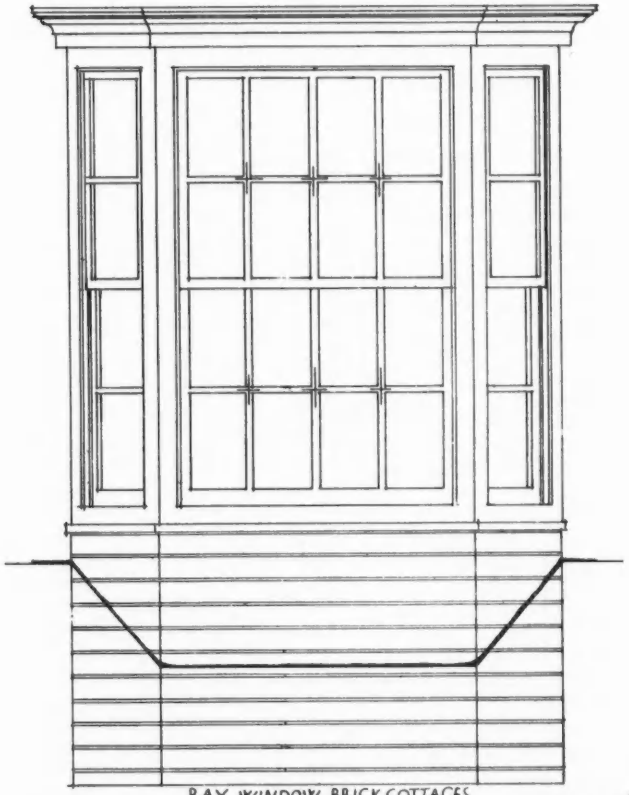
MEASURED AND DRAWN OCT 1928
PHILIP EVANS PALMER A.R.I.B.A

Belmangate GUISBOROUGH Yorkshire

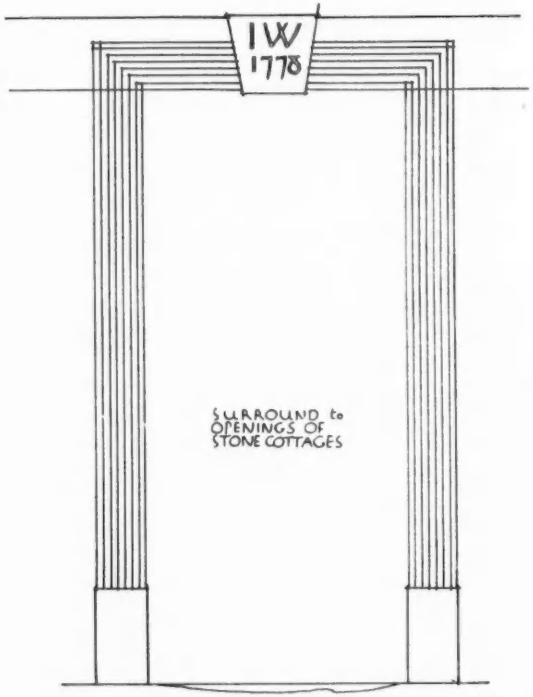
Sheet 2

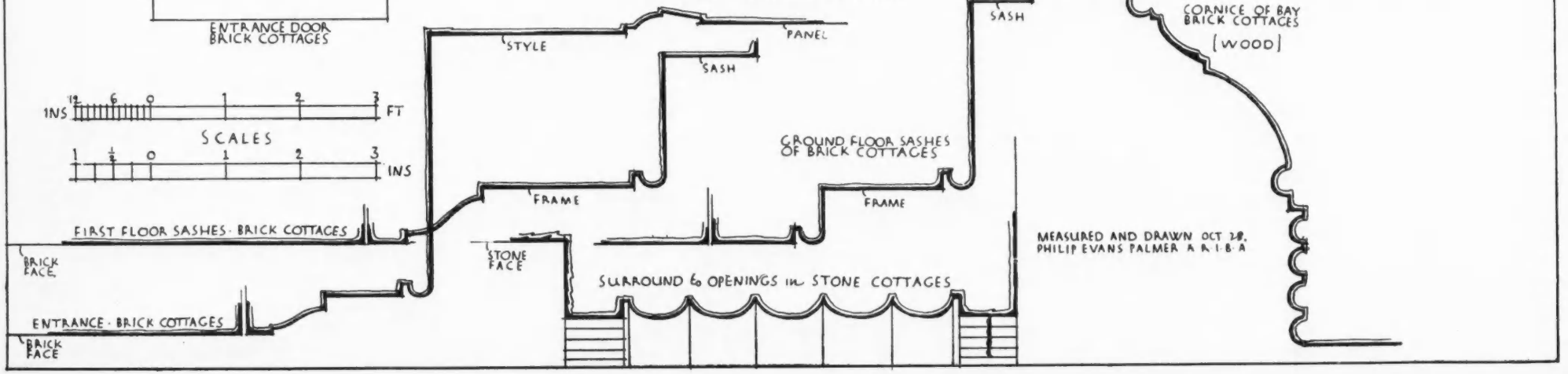


ENTRANCE DOOR BRICK COTTAGES



BAY WINDOW BRICK COTTAGES





MEASURED AND DRAWN OCT 28.
PHILIP EVANS PALMER A.R.I.B.A

FOUR BRICK COTTAGES IN BELMANGATE, WEST SIDE

A TOWER OF INDUSTRY

AT A GLASS WAREHOUSE BY THE REGENT'S CANAL, LONDON, N.

[*Sir John W. Simpson, K.B.E., Architect.*

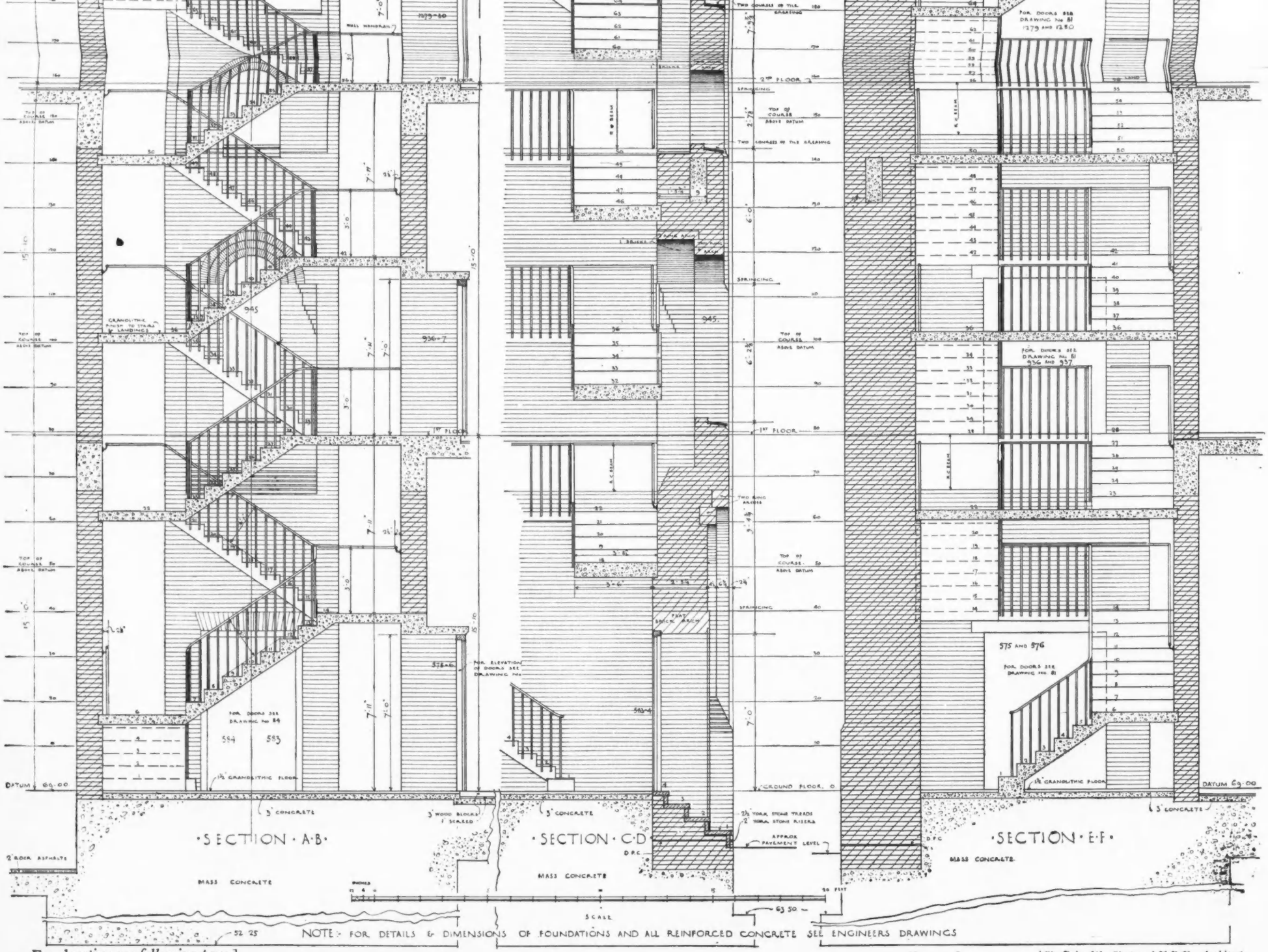
A VIEW FROM THE CORNER OF SHEPHERDESS WALK AND EAGLE WHARF ROAD

THIS tower, the architect's working drawings of which are reproduced on the following three pages, forms the dominating feature of the glass warehouse of Messrs. Pilkington Brothers, Ltd., in Shepherdess Walk, N. It reaches to a height of about 75 ft. above ground level, and contains a staircase serving all the upper floors of the building.

The main structure is of reinforced concrete, and the exterior is faced with $1\frac{3}{4}$-in. bricks. The roof is covered with tiles. The staircase and landings have a granolithic finish.

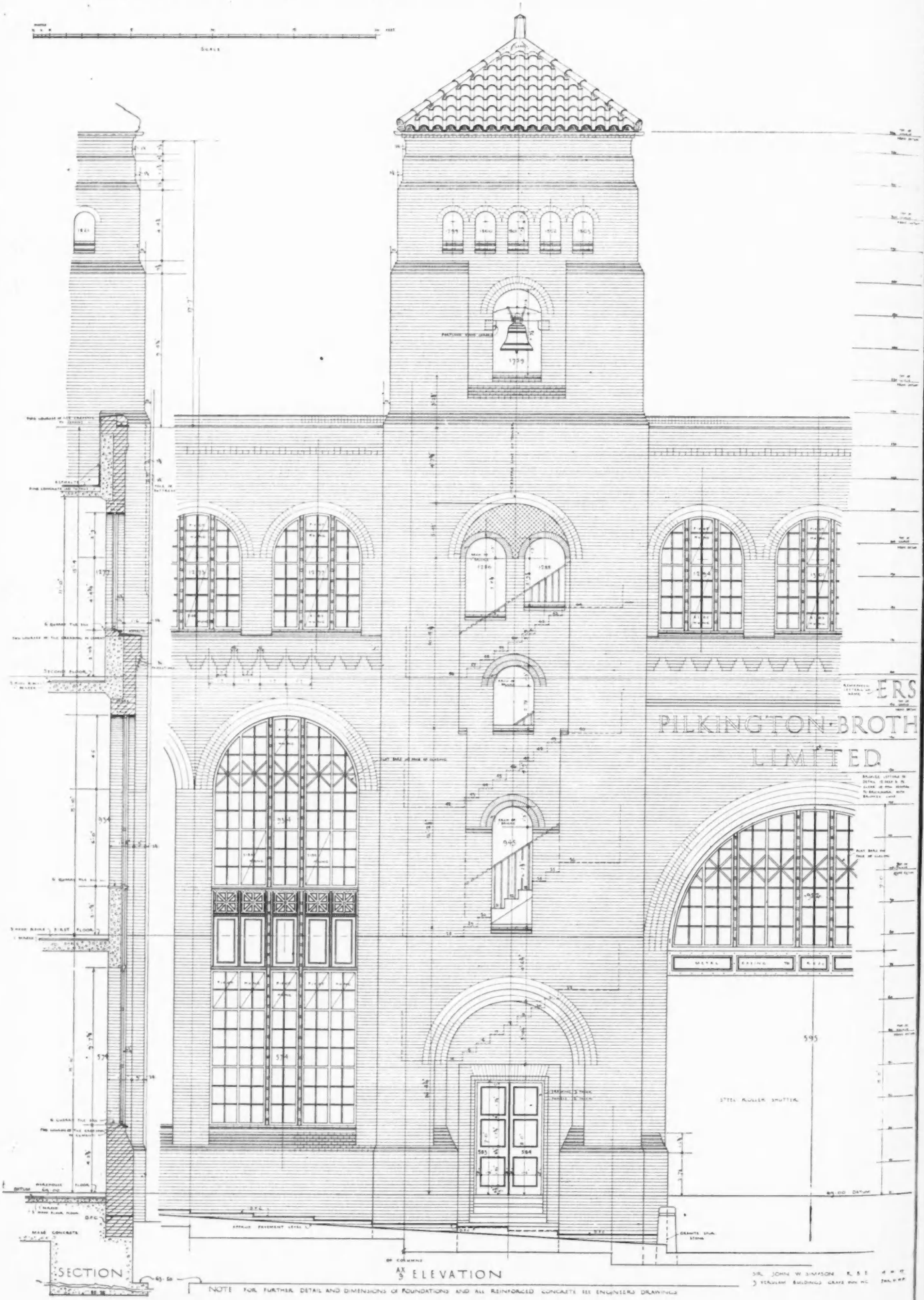
Further illustrations and a description of the warehouse appear on pages 105–8 of this week's issue.

LEAD DRESSING
3"×2" RAFTERS
7"×9" PIPS
4½"×3 PLATE
ASPHALTE
LADDER
TOP OF PARAPET
BREEZE CONCRETE LAID TO FALLS
STEEL DOOR
OUTLET
ROOF
FOR DETAILS OF ROOF SEE SECTION A B
FOR POSITION OF OPENING SEE PLAN
FOR DOORS SEE DRAWING No 81 1279 AND 1280
1759
1752
1288
1286



For elevation see following page.]

[*Sir John W. Simpson,* K.B.E., *Architect.*



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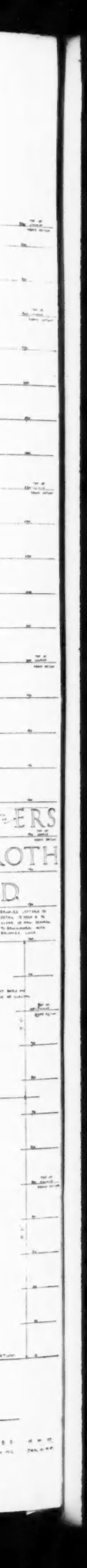


SELECTED PRECEDENTS:

CIRCULAR PLANS FROM SCOTLAND

1. *THE RETREAT, ST. BATRAN'S, BERWICKSHIRE: GENERAL VIEW FROM S.W.*

THE predominance of curves in the plans of the Scottish Baronial style might almost have been expected to exert an influence on the work of the eighteenth century. However, it is rather the reverse, and the tendency for bleak square houses, churches and towers is rather a marked contrast to the flamboyant playfulness of the earlier style. There are, nevertheless, some very charming exceptions to this rule, and one of the most amusing is a little hunting lodge built towards the end of the century in Berwickshire, in the "Gothick Taste."

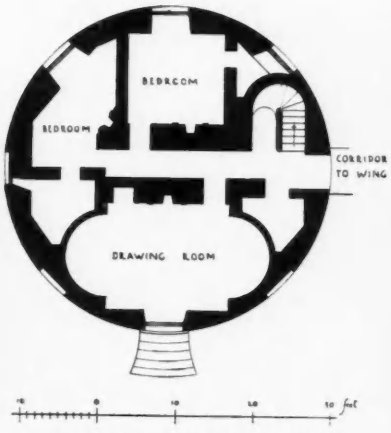
It combines in a small way some relics of the grand manner with a very distinct leaning towards the increasing love for the picturesque. It is set on a haugh by the banks of the Whiteadder amid fine trees and, for its size, makes an admirable display (figure 1). For the plan of the main block (figure 3) is a circle, which has, at a little distance on either side, symmetrical wings making a frontage of nearly three hundred feet. The east block is connected to the cylindrical centre by a passage, and contains the dining-room and kitchen accommodation, while the westerly block houses the groom, coach, horses and hounds.

The "Gothick" windows are symmetrically set in white roughcast walls, and in the centre block the conical slate roof leads up to a stout round chimney-stack (figure 2). The plan of this block is most ingenious, for it achieves two rooms of reasonable shape on each floor, the drawing-room, without doubt, being rather charming with its semicircular ends. The staircase is in the dark, since it did not occur near enough to any of the windows, whose strict placing has led not only to some being sham, but to others having two or three real panes (figure 4), and the remainder paint! In some of the rooms the ceilings are curious, for, instead of being flat, they rise and fall in waves around each joist.

Another and much more remote example of the circular plan is the curious church of Kilarrow at Bowmare, on the Isle of Islay (figure 5). It was built in 1767, a time when even the most obscure village was laid out to some plan. In Bowmare the opportunity was taken to show off the town from the moment of arrival, for the main street is built on a hill with the jetty at the bottom and the round church dominating it at the top. It closes the vista admirably; for its curved body, clad in white roughcast, leads the eye to the central feature, a rather stunted freestone tower, beneath which is the main entrance. Above this door is a pompous Latin inscription, giving the date and making clear that one "Daniel Campbell, Lord of this Island, built this church at his own charges." The interior is uninteresting except for a certain speculation as to how the roof is constructed beyond the plaster ceiling (see plan, figure 6) and just what the timber post in the middle contributes towards the strain!

IAN G. LINDSAY

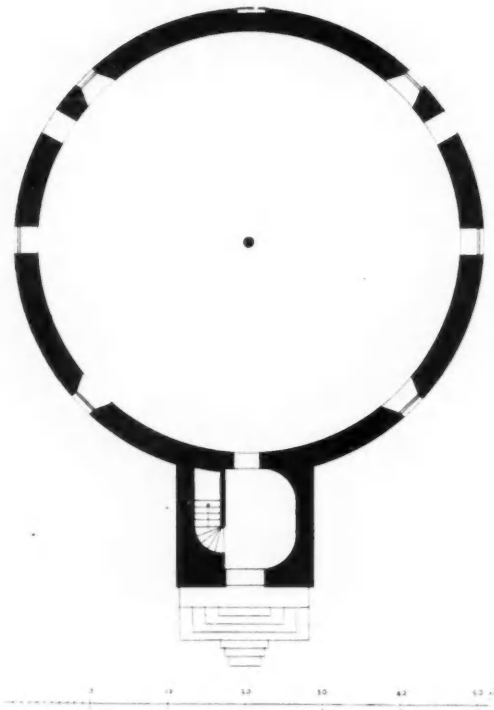
2. *THE RETREAT: FROM N.E.*



3. *GROUND-FLOOR PLAN.*

4. *THE RETREAT: FROM E.*

5. *CHURCH OF KILARROW, BOWMORE, ISLE OF ISLAY*



6. *KILARROW CHURCH: GROUND PLAN*

THE ARCHITECTS' JOURNAL

WEDNESDAY, JULY 29, 1931

SLUM BY SLUM

THIS is an age pre-eminent in its capacity for being bored. We find the business of abolishing slums is especially tedious. Our forefathers had all the excitement of the matter, those voluble reformers and politicians who attacked the problem with the forgotten art of rhetoric, and conducted ferocious public controversies over water-closets, and cut down phalanxes of liars and unbelievers in drains. The shouting is over now. The captains have left us with their Acts of Parliament for us to carry out.

The series of Acts from 1868 to 1930 has made it possible to abolish slums, and if we implemented our birthright with sufficient energy there need not be a single insanitary or overcrowded house in thirty years' time.

It is true that we have just come to the most difficult part of the work. For the easier part, the building of housing estates such as Becontree, Dagenham and Downham and the thousands of housing schemes throughout the country, involved the buying of sites still bare and the provision where necessary of adequate transport. Moreover these estates on the fringe of the town gave accommodation for the more highly-paid and "respectable" workers, who know how to appreciate them.

The hardest problem is to rehouse the poorest city workers in cities already saturated with population. The procedure is difficult and complicated. First, a site has to be found large enough for a sufficient number of flats to make the proposition economically sound, and such sites are difficult to find in built-up areas. It has to be valued and its several interests purchased. At the same time the slum area chosen for abolition will have been scheduled, and the houses classed as unfit for human habitation. The claims of the owners for compensation must be examined and met or the slum itself purchased. The lay-out and plans of the new dwellings are prepared and criticized by committees, the Council concerned, and the Ministry of Health, and all reasonable objections are considered and given effect. Eventually the building will rise, will be completed. Then comes the exhausting business of "decanting," i.e. of moving the slum-dwellers from their filth, their spacelessness, their lack of sanitary conveniences, and, also, it must be remembered, from their homes. In many cases they refuse to go to their new quarters, but prefer to wander off to relations in other slums and pay an exorbitant rent for one room. Others have to be persuaded or even bribed into the Council's flats. The best go gladly.

At last the old site is cleared of its inhabitants and at once is cleared of its buildings; the slum has disappeared. The process of scheduling another slum area and erecting another block of flats on the site just cleared is commenced. And so it should go on, it may be slowly and surely. But in too many cases the first step, the step which matters, is never taken. The force of public opinion is proving too weak for effective and rapid action, and for the overwhelming of those vested interests which always regard Councils and committees as dug-outs provided for their refuge.

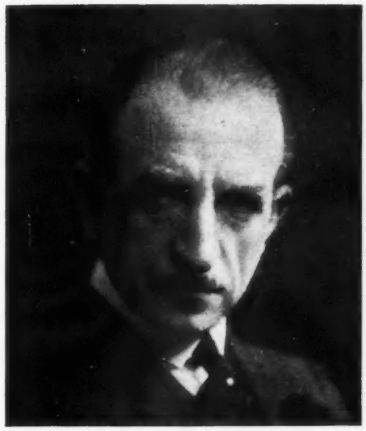
We take pride in believing that the professional class has just a little more altruism, a little more spiritual driving force, than the ordinary citizen. And so we do not hesitate to ask architects that they shall realize a special moral responsibility, along with the clergy and the doctors, in this matter of slum clearance. For architects by virtue of their professional experience know the evil effects on the nation as a whole which follow from lack of space in living and bed rooms, from lack of sanitary conveniences, and from lack of larders. They are more shocked than the ordinary citizen by the Bishop of Southwark's account of basement dwellings, in the House of Lords, the other day. When they hear that in a Newcastle building each room is occupied by a single family, seventy-eight people in all, of whom over forty are children, they are more distressed than the average voter. The nation wants a Raymond Unwin in every parish.

[*By J. L. Ball and H. W. Simister.*

THE NEW BLUE COAT SCHOOL, BIRMINGHAM

A study of the central administration block and other buildings, from the south. The houses to right and left, and facing the camera in the distance, are children's houses. For other illustrations, plans and a description of the new buildings on the twenty-five-acre site at Edgbaston, see pages 137–140 of this issue.

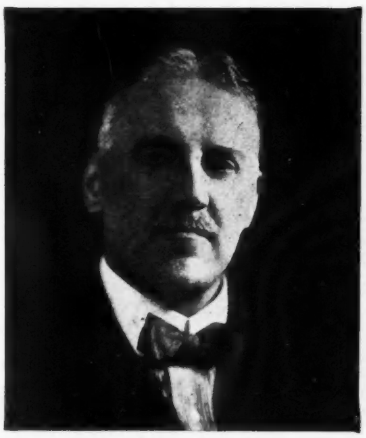
NEWS & TOPICS



Lt.-Colonel T. C. Russell Moore, M.P.

On this page are illustrated portraits of six personalities of the Architects Registration Bill, now awaiting Royal assent before being placed on the Statute Book.

Dr. Raymond Unwin, President-Elect of the R.I.B.A.



Major Harry Barnes.

Astragal's note on the celebration dinner held on Monday of last week to mark the passing of the Bill through Parliament, is printed below.

THE R.I.B.A. REGISTRATION DINNER

THE passing of the Registration Bill through Parliament, celebrated by a dinner to which both sides of the battle were invited, presented the happy opportunity for a fit and proper recognition of the services performed for this great advancement of architectural education by men of widely differing outlook. Dr. Unwin's speech was, therefore, a thank-offering from the Institute to a body of public men, headed by Lt.-Col. Russell Moore, whose four years of active time and thought have ended in the successful pilotage of the Bill through both Houses. Dr. Unwin's list was a long one, and included Major Harry Barnes, the Chairman of the Registration Committee, who has directed the course of the long and chequered campaign; Sir Clement Kinloch-Cooke, Bt., who introduced the Bill in 1927, and presided over the Select Committee; Mr. Ben Tillett, Mr. George Hicks, and many others whose efforts were directed to the same end—not forgetting the House of Peers and the Civil Servants who made straight and understandable the thorny way.

As Major Harry Barnes said, the Bill has not been successful in safeguarding the title "architect"—which is a severe loss—but it has assured that architecture will in the future be served as a profession, more co-ordinated, better trained, and more representative of the whole body of society. This is an advance which time alone will consolidate.

THE "EXPEDIENT" CHARING CROSS SCHEME

The Charing Cross Bridge Advisory Committee, which was reconstituted in order to reconsider Scheme No. 4, could find no ground for altering their opinion that the scheme would be too costly, and told the Improvements Committee of the L.C.C. that further consideration could not affect the original document so far as its main findings were concerned. The Council has therefore resolved to accept Scheme No. 6 as the only scheme left for them to carry on with; "second best," as Sir Percy Harris said, with no certain chances of being any more acceptable to Parliament than the last one—but perhaps the only thing left to be done.

Sir Clement Kinloch-Cooke, BT.

Mr. Ian MacAlister, Secretary, R.I.B.A.

Mr. George Hicks.

It is difficult to believe that the Council of the L.C.C. can put forward a scheme which even its authors and sponsors cannot support by the normally accepted canons of town planning, and must label *expedient*: still more difficult to see what measure of improvement, financial or social, this scheme can bring to the district south of the river. If I thought there was a chance that the scheme offered a possible basis for a fine development, these columns would radiate goodwill towards the L.C.C. I cannot so think, and see no reason why *expediency* should make a fool of all reasonable principles.

RENT DECONTROL

The Report of the Rent Restrictions Act Committee, which has been sitting for some time, is now available. It is a fairly involved document, because the question of rent control has become very complicated during the years it has been in use. The main conclusions of the Committee flow from the premiss that decontrol of any class of house is dependent upon whether the shortage in that class is being rapidly overtaken. They, therefore, divide houses into three classes of rents, and advise the immediate decontrol of class A, for which an abundance of accommodation exists; the gradual decontrol of class B, which is a type of house rated at over £20 but under £45 in the London area, in which new building is rapidly overtaking the deficit. Class C, for houses under rateable values of £20, they regard as being still suitable for control and for recontrol where they have been allowed to be decontrolled. Building has hardly touched this lower class housing, and as the report remarks, the social change brought about by the security of tenure of sixteen years of control is not lightly to be thrown aside. When the shortage is finally ended, it will be time to abolish control. To do so now would occasion untold hardship, and I am glad to see that the report recommends the formation of Advisory Committees to act informally in instructing tenants in their position under the Acts. There is, one knows, much unfair bullying of ignorant tenants that proper guidance can circumvent.

LIVERPOOL'S NEW AERODROME

It has now been decided by the Liverpool Finance Committee to spend between £30,000 and £50,000 on laying out and equipping an aerodrome at Speke, on the outskirts of the city. It will be remembered that the city were advised in the choice of site and in the design of the aerodrome by Sir Alan Cobham, with whom Sir John Burnet and Partners worked in collaboration. Their plans and drawings have been already reproduced in these pages.

THE SALE OF LITTLEHAMPTON

The Duke of Norfolk's sale of Littlehampton to Percy Hoovey Estates, Ltd., has been the great deal of the moment. To the local Council it must have come as a great disappointment, for they had hoped to be able to purchase certain sites and foreshore rights, which the Duke could not find it possible to sever from the main sale. The actual control of Littlehampton passes, therefore, into the hands of estate developers, and we shall be able to see which of the two is better at laying out a seaside town. I passed in a car last week-end along that particular stretch of coast, and found little evidence of anything but haphazard growth. In Bognor were some very charming Regency houses built round squares running inland from the sea front—a very economical and pleasant form of development, securing the sight of the sea to the maximum number of people—but all the recent development appeared to be built to no good plan and in a variety of styles. In truth, these places are in need of a sustained course of architectural discipline.

"BIG BEN" BLUSHES

A rehearsal of part of the scheme for floodlighting prominent buildings in London during the period of the Triennial International Illumination Congress and the Faraday centenary celebrations to be held in September, was given on Tuesday evening of last week. Among the buildings floodlit were Westminster Abbey and "Big Ben," as will be seen from the accompanying photograph. The Abbey particularly showed the great potentialities of the floodlighting of our ecclesiastical buildings. The western towers stood out as a remarkable picture against the dark sky. The face of "Big Ben" took on a healthy blush, from the amber-sprayed lamps behind the face of the clock, which, when flooded from below, gave a pink colour relief. Well, London during the past few months has seen brighter cricket; now we are to see a brighter London!

ASTRAGAL

A photographic study of the floodlighting of the western towers of Westminster Abbey and "Big Ben," a rehearsal of which was held on Tuesday of last week, in preparation for the Triennial International Illumination Congress, and the Faraday Centenary Celebrations in September.

The main, or south-westerly, front of the administration block. The single-story section seen on the left is the dining-hall; behind it are the kitchens, flanked by service quarters and stores. The building surrounds an internal courtyard with paved causeway.

BLUE COAT SCHOOL, BIRMINGHAM

DESIGNED BY

J. L. BALL & H. W. SIMISTER

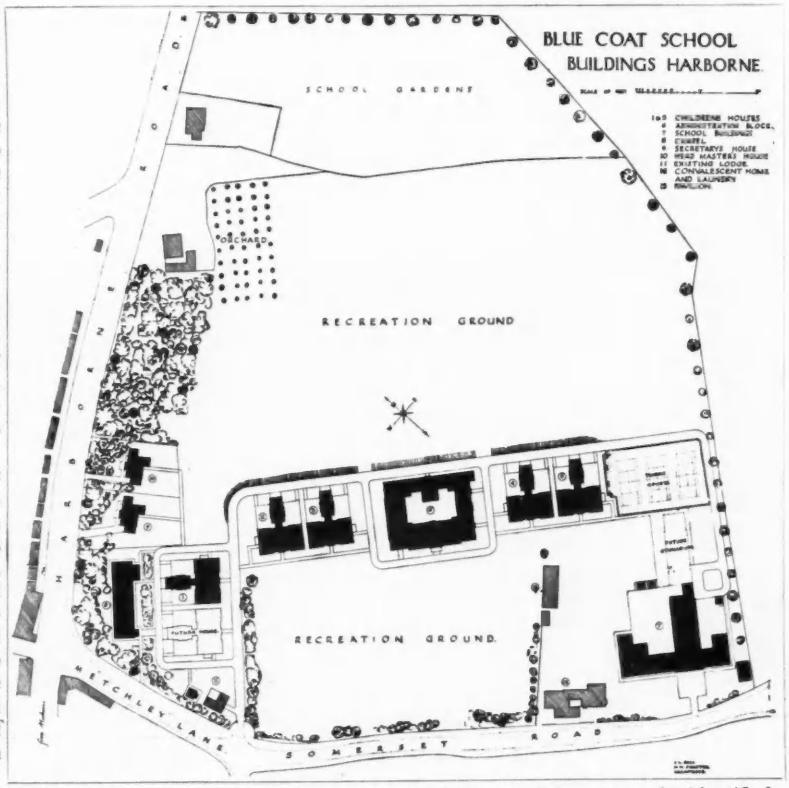
MOST people who know Birmingham at all will remember the fine building of the Blue Coat Institution, the grey stone front of which faces, across the churchyard, towards the east end of St. Philip's Procathedral. Its foundation carries back the mind to forgotten times, and to names fallen into oblivion. During two hundred years it has adorned the town with the antique grace and unpremeditated charm of the eighteenth century.

It was with regret that the Governors parted from a place which had become a memorial. But in the course of two centuries the old school has become crowded upon by masses of building; miles of streets now separate it from playing fields and open country.

An unusually beautiful site of twenty-five acres was secured in Edgbaston, and there the new Blue Coat School has been built. Better sanitation and better air, more light and space, wider horizons, the beauty of trees and grass, and in time the amenity of gardens—such things compensate for what has been relinquished.

The new institution consists of five homes, each for thirty-six children, with space for more when needed; an administration building, containing a dining-hall (all meals are taken here), kitchens, matron's department, and secretarial offices; and a school building designed for both primary and secondary education. There are also two separate private houses for the headmaster and the secretary; and a chapel—for this is a Church of England institution—is to be built in the near future.

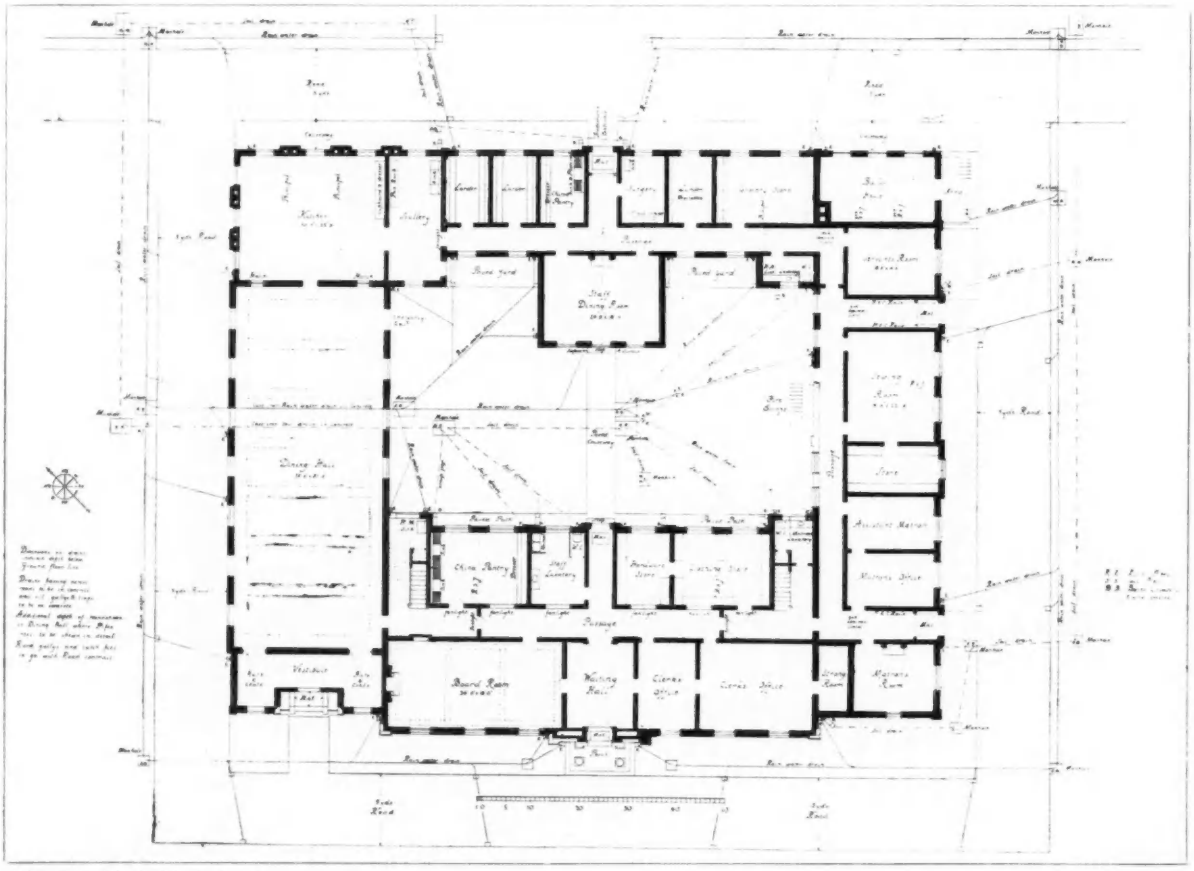
For the buildings a pleasant mottled red facing-brick has been used in combination with dressings of Hollington stone. The roofs are covered with slates; the sash windows are painted white. The various buildings have been arranged principally along the north side of a large area of grass; the group is seen very well from the entrance drive. This aspect is presented in the frontispiece to this issue.



This key plan gives the layout of the school buildings, and from it can be identified the positions of the various blocks, the chief of which are illustrated here. The site is twenty-five acres in extent, and is at Edgbaston.

D

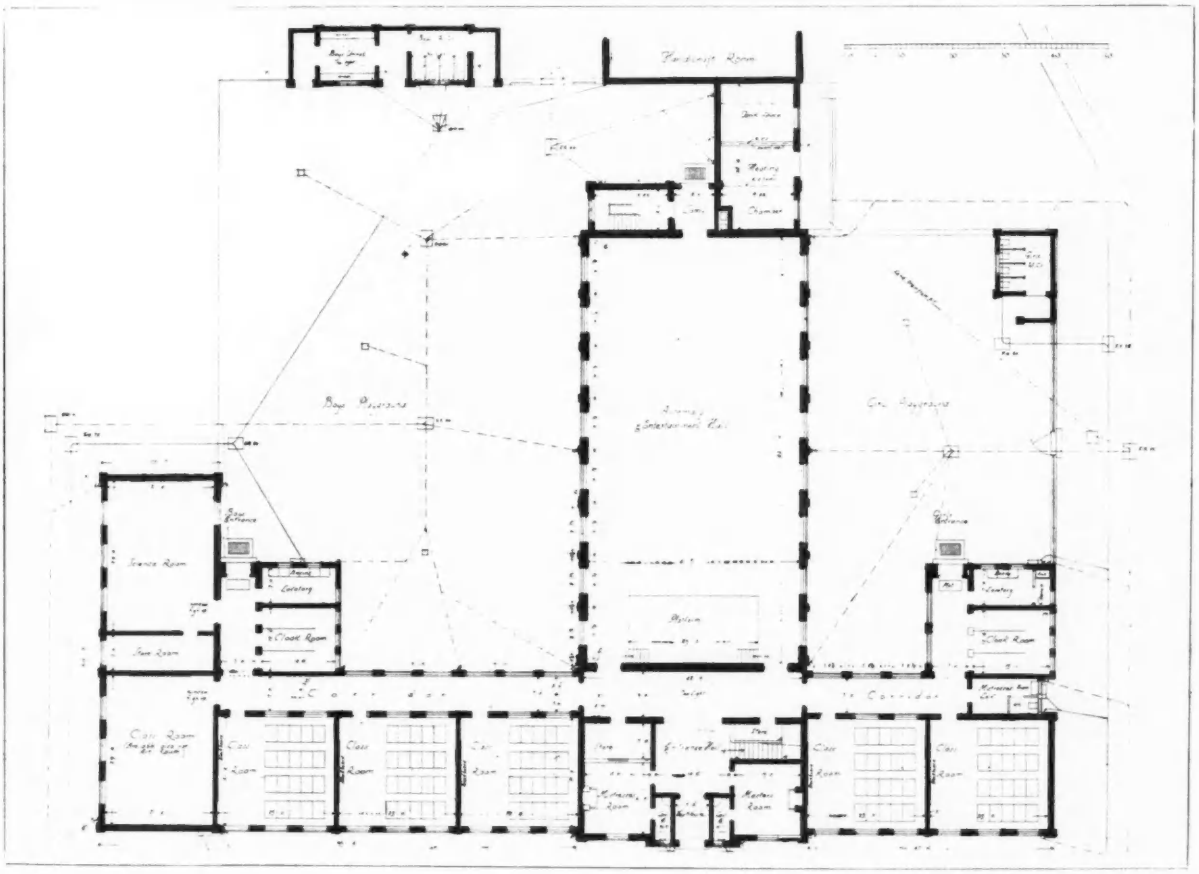
The administration block from the east. The boiler-house is seen in the foreground, and the rooms in both the back and the end of the building are mainly occupied by service and administrative quarters.



Blue Coat School, Birmingham.]

The ground-floor plan of the administration block, the arrangement of which speaks for itself. On the floor above are fifteen bedrooms, baths and lavatories. About half the ground area—e.g. the dining-hall and service wing—is of one story only.

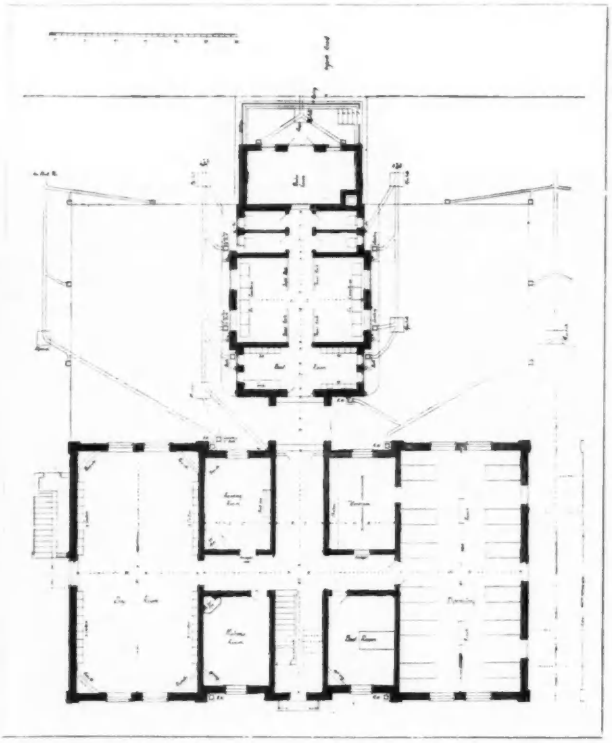
The south-westerly front of the school block. Mistresses' and masters' rooms are planned on either side of the entrance seen in the centre of the façade. In the wings are class-rooms.



[*By J. L. Ball and H. W. Simister.*

The ground-floor plan of the school block. Placed centrally is the assembly and entertainment hall, extending upward into the first floor. On the right is the girls' playground; on the left, the boys'. Class-rooms range along the south-westerly front.

The main entrance doorway of the administration block, showing the statuettes of girl and boy scholars above the porch, and the clock tower which surmounts the whole.



The ground-floor plan of a typical children's house. Above are two dormitories, with bath accommodation, including spray baths, and a dressing-room, wardrobe and bedroom.

Blue Coat School, Birmingham.] [*By J. L. Ball and H. W. Simister.*

This view of the headmaster's house (left) and secretary's house (right) serves also to suggest the sylvan character of the site of twenty-five acres, at Edgbaston, chosen as the school's new home.

THE ARCHITECTS (REGISTRATION) ACT

Its History and Provisions

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

NOW that the House of Commons has considered and agreed to the Lords' amendments to the Architects (Registration) Bill, the measure only awaits the Royal Assent. At the time of writing this has not yet been given, but when this article appears in print it is probable that the Bill will have found its way on to the Statute Book.

A CHEQUERED CAREER

It will be remembered that, after some years of controversy, there appeared to be little hope of the Bill becoming law when Lt.-Col. Moore introduced it again in the House of Commons last autumn. But by one of those strange pieces of good fortune which so often happens in the most unexpected fashion at Westminster, the Bill immediately before it was quickly disposed of, and the Architects Bill secured a second reading.

Some little time then passed before it was considered by Standing Committee "B," and readers of this JOURNAL do not need to be reminded of the drastic changes that were made there, nor of the wholesale concessions which the promoters—always ready to do their best to appease the implacable dislike of the R.I.B.A. which was uppermost in the minds of a handful of Labour members—agreed to during the Committee stage. Indeed, so extensive and hurried were some of the alterations that, when the measure came before the House of Lords, it was necessary almost entirely to redraft it, without, however, altering it in any fundamental respect.

Obviously, therefore, the Bill differs very greatly from the original draft. It was on October 31, 1930, that the measure was first of all printed after its formal introduction into the House of Commons. Its main purpose then was to empower the Council of the R.I.B.A., within six months of the passing of the Act, to set up and maintain a Register of Architects.

THE REGISTRATION COUNCIL

Opposition from Mr. MacShane and some of his Socialist friends rapidly developed, and, after exhaustive negotiations, Lt.-Col. Moore accepted a very large number of amendments in order to save the Bill. It was agreed to set up a Registration Council —"an independent, composite body," as Labour members described it—consisting of representatives of many bodies who have some connection, however vague, with architecture. One of the great dangers seems to be that this Council will be so unwieldy as to be unsuitable for the work for which it is designed.

A REGISTER WITHIN SIX MONTHS

The Registration Council, within six months of the passing of the Act, is to set up and maintain "the Register of Architects," which will be published. The Council is also empowered to grant a certificate of registration. The aim of Mr. MacShane and his friends in getting such a Council established was to take away all semblance of power from the R.I.B.A., and this, to a large extent, they have succeeded in doing. The new Council is empowered to appoint annually a Board of Architectural Education, composed of one nominee of each of the leading schools of architecture, and representatives of other institutions and associations.

THE ADMISSION COMMITTEE

The Council also has the duty of appointing annually an Admission Committee, made up of one person nominated by each of the following bodies: The Institution of Municipal and County Engineers; the Society of Engineers; the Chartered Surveyors' Institution; the Institution of Structural Engineers; the Institute of Builders; and also of not less than twelve or more than eighteen registered persons, of whom four shall be nominated by the R.I.B.A., four by the Incorporated Association of Architects and Surveyors, one by the Faculty of Architects and Surveyors, and the remainder by the Council.

The duty of the Board of Architectural Education is to recommend to the Council: "(*a*) The recognition of any examinations in architecture the passing of which ought, in the opinion of the Board, to qualify persons for registration; and (*b*) the holding of any examinations in architecture which ought, in the opinion of the Board, to be passed by applicants for registration under this Act; and to hold examinations in architecture in accordance with this Act." The Admission Committee is to consider every application for registration and to report to the Council whether or not the applicant is, in the opinion of the Committee, qualified for registration.

THE PRESCRIBED QUALIFICATIONS

Both the Council and the Board, as now constituted, will be very cumbersome bodies, composed of many conflicting interests, and the work of registration is likely to be long and complicated. The Council is to prescribe the fee to be paid on registration, and a person is to be qualified for registration if the members of the Council are satisfied, on a report of the Admission Committee, "(*a*) That he is an architect member of the Royal Academy or of the Royal Scottish Academy; or (*b*) that his application for registration was made within two years from the commencement of this Act, and that at the commencement of this Act he was, or had been, practising as an architect in the United Kingdom; or (*c*) that he has passed any examination in architecture which is for the time being recognized by the Council; or (*d*) that he possesses the prescribed qualifications."

These "prescribed qualifications" may include "the passing of any examinations in architecture, the holding of which may have been recommended to the Council by the Board, and in that event the Council shall direct the Board to hold those examinations, and those examinations shall be held by the Board accordingly and at least once a year and at such times and places as the Board may determine."

Power is given to the Council to remove from the Register the name of any person guilty of criminal offence or professional misconduct. To assist them in their unpleasant task the members of the Council are to appoint annually a Discipline Committee. A right of appeal to the High Court against removal from the Register is given. The Bill prohibits the use of the title "Registered Architect" by any person not duly registered under the Bill, under penalty of a fine not exceeding £50 for the first offence, and £100 for each subsequent offence. Penalties are also laid down for fraudulent misrepresentation.

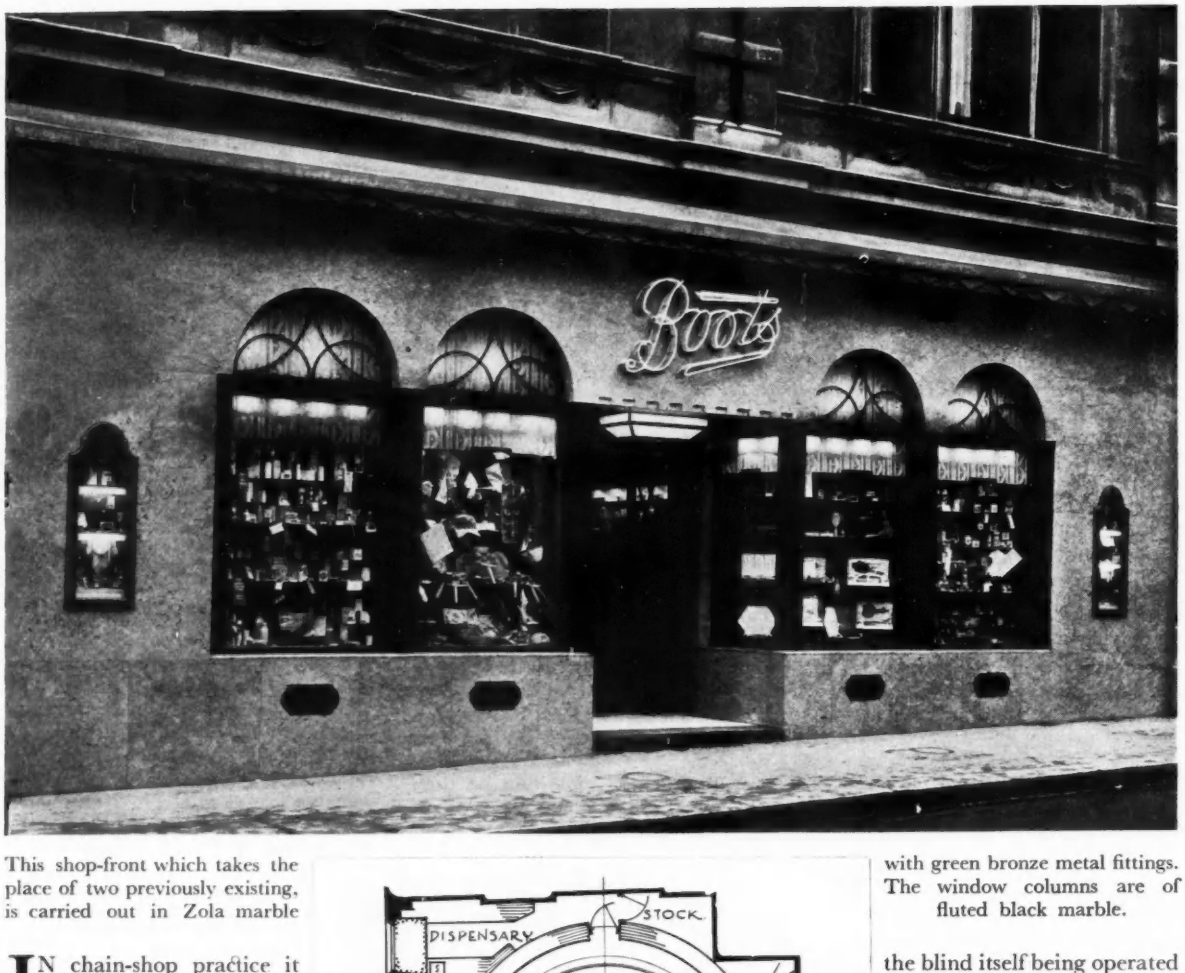
FEES ALLOCATED TO SCHOLARSHIPS

It is provided that "at least half the total amount of the fees received in each calendar year by the Council under this Act shall be devoted, in such manner and on such conditions as the Council may determine, to the provision of scholarships and maintenance grants for the assistance of students in architecture whose means appear to the Council to be insufficient to enable them to pursue their studies."

The measure is not to come into force until January 1, 1932, and is not to apply to Northern Ireland until an Order-in-Council to that effect is made.

TWO SHOPS MADE INTO ONE IN BOND STREET, W.

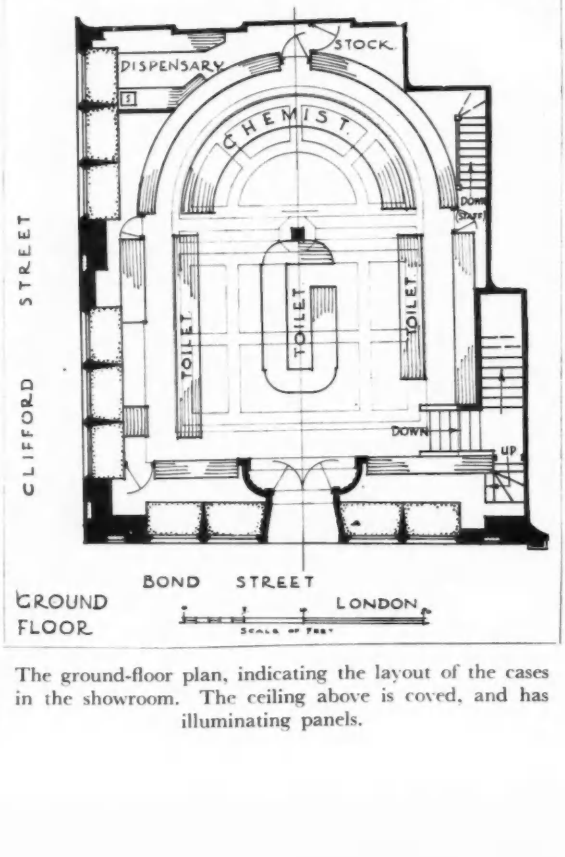
FROM DESIGNS BY PERCY BARTLETT



This shop-front which takes the place of two previously existing, is carried out in Zola marble with green bronze metal fittings. The window columns are of fluted black marble.

IN chain-shop practice it not infrequently happens that adaptations have to be made of premises not primarily designed for the purpose immediately in view, in order to bring them, from both utilitarian and decorative points of view, into line with precedents that have become more or less standardized and identified with the undertaking concerned. An alteration of this kind is the subject of the photograph and plan reproduced on this page, which show, after completion of the work, shop premises in Bond Street that have recently been converted from two shops into one.

The exterior is designed generally in Zola marble, and has black marble fluted columns to the windows. The shop-fronts and doors are executed in green bronze, together with the blind casing, the blind itself being operated by internal winding gear so as to eliminate the necessity for unsightly blind arms.



The ground-floor plan, indicating the layout of the cases in the showroom. The ceiling above is coved, and has illuminating panels.

The provision of heavy steelwork to carry the superstructure of the building above the ground-floor showroom called for a false ceiling. This has been carried out with coved sides, most of the flat portion being occupied by illuminating panels. It is formed of fibrous plaster, enriched with a chevron motif, finished in silver leaf, lacquered, while the fibrous plaster beams have been painted a rose colour in high gloss paint.

Black marble is used for the columns and pilasters, and the floor is in ceramic mosaic in shades of black, buff, white and green. The interior fittings were carried out in a silver alloy and walnut.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : X

A NEW VENTURE

BY KARSHISH
(H. B. CRESWELL)

IF this was a treatise, instead of being a narrative, the rebuilding of Brayness Post Office would supply materials for a bulky one. My first encounter with bills of quantities is, however, a matter of narrative; for I knew nothing of them till Father slammed me on the head with his, and the experience fortified me for the rest of my life. I should scarcely have known of the existence of bills of quantities if Grig had not, from time to time, sent me to ask his quantity surveyors, whose offices were next door, what they had "taken" to cover a particular detail of the work; but directly we got going at Brayness, Richards or Mr. George or Father were continually complaining: "I can't find that there shuttering in the quantities, nowhere"; or, "It don't seem the surveyors have included the cutting away of the chimney breast"; or, "From all we can see, there's a lot of work got to be done that isn't allowed for in the bills."

I was entirely incapable of finding my way among the items, and could not understand many of the descriptions; but I was impressed by the apparent deficiencies, and had no recourse but to refer to Tallard by conscientiously noting all the questions raised and embodying them in a report which ran to two-and-a-half foolscap sheets of arduous penmanship. Tallard answered the whole of them almost by return of post, in green ink, at the head of page 1, as follows :

"Quantities nothing to do with you. R. T. 7/6."

He offered no aids to the digestion of this gritty morsel, but left Nature to provide relief, which she did by forcing me to discover for myself that the quantities were no part of the contract, except as a schedule for estimating variations; and that any question of their accuracy had to be answered by the quantity surveyors who, though nominated by the architect, prepared the bills on behalf of the builder, who paid them for that service, and to whom they were liable.

"Yes! Well! Oh! All right! I suppose we shall have to see how things come out," Father said, when I showed him Tallard's comment; and I have no doubt things came out well, for I heard no more complaints; but it was borne in upon me that there was, in fact, a defect in the bills that Father was not aware of. I gained this knowledge from Mr. Andrew Reece, the sub-contractor for the masonry—for the Post Office was architectured in Bath stone.

He was a red-haired little Welshman, with a skin the colour of milk, who, though he was unfailingly civil to me, seemed always in a bad temper; and he worried the six or eight journeymen he employed, like a wasp. I noticed that Reece seemed reluctant to explain the descriptions of labour in the bills which perplexed me so greatly; and one day when I pressed him he coloured up and frankly confessed that he did not know their meaning.

"Then, how were you able to price the bill?" I asked.

He then told me that he noted the cube measure, and judged from the drawings what the worked stone was worth a cubic foot. He then fixed a rate for the cubed item in the bill, and deducted the extended total from the total given by the value he had fixed for the worked stone. The difference, which represented the value of the labours, he divided up judiciously among the labour items, and he then worked the extension of each through backwards to find the measure and rates, thus completing a picture of a quantity surveyor making laborious detailed bills which the person they were designed to inform, scarcely less laboriously, *un*made. Reece, no doubt, arrived at a true estimate; but had variations in the work been ordered, the Office of Works would either have paid too much or Reece would have been hit in the pocket.

It was this over-itemizing of the bills that so confused and worried the builder, and my own clients in later years benefited from my thus early becoming aware that over-detailed quantities bring high costs, and that, however instrumental to close tendering the exact definition of the London system of measuring may be in London, rough bills of quantities serve their purpose better than elaborate ones in the provinces.

Reece gave me a chance of sticking a feather in my cap by warning me that the Box Ground stone specified for sills and weathered members was subject to decay at Brayness, although the Coombe Down ordered for the ashlaring and other features stood well. I reported accordingly to Tallard, and in ten days received back the sheet minuted at foot somewhat as follows :

Mr. Benson. For immediate attention. R.T. 17/6.

Mr. Tallard. Yes. I find Box Ground has this reputation on parts of coast. G.F.B. 20/6.

Mr. Phrendigast!!! Your observations, please. R.T. 21/6.

Mr. Tallard. I am surprised to learn this. We have used Box Ground in London suburbs, and in Midland manufacturing towns and sea ports, and have had no failures. I cannot think fears will be justified, but have noted the matter. C.P. 23/6.

Mr. Whistlow. Coombe Down to be substituted for Box Ground throughout. R.T. 24/6.

Mr. Whistlow, to note with endorsement, and return. S.K.D. for Sec. 24/6.

The foregoing is characteristic of the inter-departmental methods of the Office of Works of those days, which, with the greatest brevity and economy of stationery and clerical work, informed everybody concerned, and set up a concise and complete record. Tallard, it will be seen, is cognizant of every step; Benson makes himself responsible for accurate research; Phrendigast, who presumably wrote the specification, is trounced with three notes of exclamation and called upon to promise to be a better boy in future; Tallard records his decision, and "S.K.D. for Sec." secures that the document shall be duly filed.

There was a strain of remorselessness in Tallard; for once—but only once—he even tickled up his clerk of works. The matter is of more interest as an example of his methods than as a record of my sufferings. I had been called upon by him to supply plans showing the whole of the gas, water and heating pipes as they existed in the old building. The task was complicated by various lengths of obsolete tubing and by the accumulations of rubbish; but I got the drawings completed and laid out all clearly in four different-coloured inks, and described further in a report. In four days the drawings came back to me, and with them the report, minuted :

"Mr. Whistlow : It is not clear how the rising main reaches tank above ceiling. You are required to complete information without delay. P.T.K. 4/7."

Then in Tallard's green ink :

"You are employed by this department to . . ."

The writing broke off, and Tallard had scribbled his pen over the words, thus conveying a reprimand without, in fact, reprimanding; and I have no doubt that this device of making the stick whistle was commonly employed by him in maintaining the rigid discipline he enforced.

Thus did my months at Brayness run their course. Tallard came down five or six times—twice without notice. He was always strictly official; scarcely spoke a word—unless grunts of acceptance or comprehension are parts of English speech; and, by disregarding my questions, warned me that I was

framing them so as to call attention to my own merits. Even Father's volubility was chilled to silence by Tallard's Arctic presence, and thus Father, Mr. George, Richards and myself wandered about the building on Tallard's heels like hens attending a cock in desultory exploration of a thoroughly scratched-out fowl run. Tallard, however, had quite another manner with the Postmaster: he buttered him in exactly the place where butter would most soothe, by greeting him as a colleague. I was at first afraid that Mr. Taylor would unload the burden of his grievances on Tallard, and stage the worn-out wrangles anew; but Tallard's tact in establishing a footing of equality discouraged Taylor from saying anything that would dim the glory shining upon him, and from first to last he never uttered a word of complaint, but basked in Tallard's formal regrets at the inconveniences caused to so important a Government official.

If, however, I expected that my chief's benign influence would soften the Postmaster's antagonism to myself, I was mistaken. It had the opposite effect of thrusting us farther apart; for Mr. Taylor, having been honoured by the condescension of the master, was by no means inclined to demean his importance by familiarity with the man. The thing was diverting, for I had pecking power over Taylor and could laugh at him.

On one of the occasions when Tallard came to the building without warning, he surprised a grotesque instance of the Postmaster's childish vanity. The scene that confronted him, when he walked straight through from the street into the new sorting office, was as follows. Two plasterers were on a trestled scaffolding for the purpose of running a cornice. The Postmaster was standing on the floor below, with his face the colour of a boiled lobster, telling them off in a shrill, agitated voice, to which they were replying with surly resentment. I was advancing from the farther door to learn what the row was about, and Richards gliding up behind me. The plasterers saw Tallard, and at once resumed their work; Taylor fell silent in the middle of a word as though someone had struck his head off, and then slipped past me out of the place; I went forward to greet Tallard, and Richards touched his hat to him. Tallard's eyes seemed to bulge more ominously than usual through his glasses, and his nose to take a fiercer crook, but he made no comment on our little family tiff, though his inspection of the work was conducted with even a deeper hush than usual.

When, however, I accompanied him to the station and he had ordered tea in the refreshment room—for he unbent in some degree when business was over—he said:

"What was going on when I arrived today?"

"Mr. Taylor was annoyed with the plasterers, sir."

"For what reason?"

"He objects to being called 'Charlie.'"

"Do you mean that the men had been impertinent?"

"No, sir. They are all most civil fellows; but Mr. Taylor thought he heard them say, 'Charlie,' and supposed they were referring to him."

Tallard grunted, "Were they?"

"They said they were *not*, sir; but Mr. Taylor is known among his postal people and all the workmen as 'Charlie,' and he feels his dignity is slighted and is always lying in wait to catch someone—in fact, I believe this is his chief preoccupation, sir. He tortures himself by imagining people are speaking of him as Charlie, and, of course, everyone plays up to it by talking of *other* Charleses, and of Charts or Charwomen, when he is at hand."

Tallard grunted again. "He will go mad if he does not take care," he said.

So, in due course, was Brayness Post Office completed; and in the elation of achievement all memory of past chaffering was forgotten. The Postmaster was delighted by his accretion of dignity; the Bradshaws grateful for the support I gave to their claim for extension of time, for they were seven weeks behind—and no wonder—and Tallard diplomatically held the threat of penalties over their heads as he might a tomahawk. We all parted good friends, and I shook no hand more warmly than the thick and hard one of Joe Richards. From first to last, through all those long months, I had never been told a fib by anyone, nor made aware of shiftiness of any kind whatever; and for myself it may be said that, though Tallard's approval was only to be measured by the quality of his grunts, the building was sound and tight from top to bottom, so that neither the Bradshaws, nor anyone else, was called upon to renew or complete any part of it, and that I left Brayness a vastly more competent architect and better man of affairs than I was when I arrived there—which, however, is not saying much.

One other capacity I acquired; and as it influenced my immediate future, and in after-years saved my (professional) life; and as it also stands as an object-lesson in the rough hewing by which alone a man gives opportunity for that miraculous shaping of his ends which is the affair of destiny, I must say something of it.

When I turned my back on the gay distractions of the delightful little watering-place to amuse myself with a sketching block on Saturday afternoons and Sundays, it was merely by an impulse to avoid empty relaxation: I had no idea that I possessed any gift for water-colour drawing, and no inkling of the passion that instructs that gift. My experience was a remarkable one. My early attempts were hopeless failures, for I was quite untutored; but I became fascinated by the transparency of the washes, and by the colours that revealed themselves in sea, land and sky; and then, because calm water was easier to handle than wind-swept, and because the old masonry jetty, with lighthouse at one end and harbour-master's office at the other, gave me subjects familiar to my pencil, I formed the habit of choosing my pitch in the fishmarket or on the rocks at the end of the wharf. Here my eyes were opened to the wonders of reflections in water.

There was one evening a moment when I was overpowered with my sense of the loveliness of what I beheld. One cannot fully speak of these unexplained intensities of feeling—flashes struck from midnights—which are part, I take it, of our spiritual make-up; but for me those few seconds, in which I seemed to go out from myself and co-mingle with the sublimity of the universe, was an experience which, though it has since been in measure repeated, has never been equalled. My pursuit of this thing that I, in part, saw with my eyes and which, in part, was within me, continued, as it seemed vainly, until one day, glancing at a sketch I had made a week before, I found I had somehow or other actually done the trick! That unexpected glance had shown me what the drawing conveyed to a stranger.

To cut a long story short, by studying the wherefore of the effect I had blundered on, I learned the way of it; and in time acquired precision and a certain style—for my work owed nothing to others. Later on, when I made drawings of churches and old houses in the neighbourhood, I showed them against rainy skies and set off by wet roads in which they were amazingly reflected, and in this way achieved what others had not the knack of doing. It is long since I have had time to make architectural perspectives, but thirty years ago my work was not unknown. This was how it began, and this is the reason that my best and most characteristic work shows buildings standing behind pools or on puddle-laden ground.

When I got back to London, I went to see Grig and took the opportunity to show him some of the things. He first piqued me by seeming amused at them, but I saw a moment later that it

was partly in surprise and partly in pleasure that he smiled.

"These sketches are most promising, Whistlow," he said; "I have no doubt you have it in you to make a name for yourself if you persevere." And he went on to say that if I cared to try my hand with two perspectives of a house, for exhibition at the Royal Academy Exhibition, and he liked them, he would buy them for that purpose.

This design was his very beautiful Cotswold House, "Clister Long Barn." The paved courtyard on the entrance front gave the "puddle merchant"—as Garston called me—just the opportunity he craved; and the terrace on the south was the wettest ever seen. The drawings were duly given the prominence which the design and the eminence of its author deserved, and made, I thought, a brave show. They won me the admiration and envy of friends, and also fifteen guineas which Grig paid me for them; but my hopes that this success would bring me similar commissions and enable me to advance a step towards architectural practice, were disappointed. Other things were in store for me.

For three or four months I worked at two competitions with Garston, who rented a small room in the office of a dirty fellow who called himself Architect and was agent for the sale of badly-built houses, of the Bigwash Estate Development Association Limited, in Norfolk. We worked all day, and sometimes till two in the morning, and I was riotously happy, as I always was in the company of Garston, whose caustic fun bubbled from inexhaustible springs. I had, however, only £53 to my credit when I left Brayness; and I was vainly looking about among architects for work which I could do in my own time at Garston's office—where my name, also, was painted up—when, as a consequence of going to a "small and early" dance in the house of social acquaintances in Notting Hill, I became Resident Architect to a firm of Agricultural Implement Makers at Nollingborough, in Huntingdonshire.

The mechanism employed by destiny to this good end was very simple. All it did was to arrange that, at the moment I was leaving my friend's house after the ceremonial call, which in those days was a fixed social ritual after a dance or dinner-party, a son of the house should be returning to the front door after seeing other guests to their carriage. He said good-bye to me, and then turned and called to me from the top of the steps:

"By the way; you're an architect, aren't you?" and when I assented, went on: "Well, I know some people who want a resident architect down at Nollingborough. Would that be of any use to you?"

I had no idea what a resident architect might be, and did not know where Nollingborough was; but I accepted the suggestion without too much warmth, and my friend said he would write to these obliging people at Nollingborough and he noted my office address for that kind purpose.

NEXT WEEK—XI: THE RESIDENT ARCHITECT

The previous instalments appeared as follows:

May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.
July 15. viii: Joe Richards: Foreman.
July 22. ix: Trials of a Clerk of Works.

LETTERS FROM READERS

Official Patronage for Industrial Design

SIR,—I was very pleased with the welcome accorded by you in your issue for July 22 to the Committee appointed by the President of the Board of Trade to consider the desirability of forming certain exhibitions of articles of everyday use and good design.

I feel sure that every member of the Committee will be encouraged by this, and by your expressions of appreciation. Doubtless, these will go a long way in counteracting the effect of the relatively few captious criticisms which have appeared elsewhere.

The scope given to the Committee is necessarily restricted, but it may be hoped that the outcome of its deliberations may be of value in achieving the objects which you so well express.

C. A. RICHTER

(MANAGING DIRECTOR, THE BATH CABINET MAKERS' CO., LTD.)

Lowest Tenders

SIR,—Referring to the letter from "Suburban Builder" which appeared in THE ARCHITECTS' JOURNAL for July 1, I, personally, think:

Invitation to tender for a small job without quantities should be restricted to a few builders and only those in whom confidence can be placed should be asked. In these circumstances I am of opinion that, if any, the lowest tender should be accepted.

It does happen, sometimes, that a client wishes for a certain builder to be included, in whom the architect cannot place complete confidence, knowing from experience that to employ such a man may mean much worry and extra trouble both to client and himself. For this state of affairs the builder in question is probably responsible, hence he would know the reason should he be passed over in favour of another man whose estimate was a little more. Obviously, it would be most unfair to ask a firm to reduce their price in order to compare favourably with the lowest tender.

Advertisements for tenders are in a different category, and applicants for quantities in such cases doubtless realize that where only a slight difference exists between the lowest tenders received, a bias in favour of a man not quite the lowest may easily result in his being employed, especially where committees are concerned. This bias may be by reason of a definite knowledge of good work or a desire to employ a local man.

Cases have been known where the price submitted was so low as to be either a mistake or a display of ignorance of the undertaking. In such a case, the acceptance of the lowest tender would mean trouble all round. In spite of the safeguarding clauses in the contract, the bankruptcy of a contractor means that it will cause an employer to spend considerably more than he bargained for to complete the work, and the slightest fear of this happening must influence the selection of a builder. C. W. PIKE

SIR,—The difficulty that "Suburban Builder" has encountered is one that I hope has not occurred in connection with any job sponsored by a member of the Institute. If I recollect aright, I learned, when I was articled, that in a limited competition amongst builders for a job, when each builder is invited by letter to submit a price, the lowest tender must be accepted, if any tender is. After all, this must surely be the only fair and reasonable procedure.

In the course of my practice I do, in fact, often come across clients who do not fully realize the point until it has been specially referred to and explained. I find it wise always to mention to all clients how a limited tendering amongst builders should be conducted, and, having done this beforehand, I have never found any difficulty when the results of the tendering are known. F. G. TROUP

SIR,—Your correspondent "Suburban Builder" appears to have a grievance in regard to the acceptance of tenders which are not the lowest in competition and in which he has been a victim. He distinctly refers to being *invited* to tender, and this is not to be confused with tenders which are *advertised* for, and

where it sometimes happens that the lowest tender is from a builder who, upon inquiries being made, is considered unsuitable for some special reason and the client obviously is recommended by his architect accordingly.

Your correspondent writes of preparing tenders from drawings and specifications and it is to be supposed that builders take out their own quantities. This can only be for small jobs, and should not take up a considerable amount of time. However, when builders are invited to tender under these conditions I am of opinion that architects, through personal inquiries, should be in a position to assume that the builders are of equal standing and, all things being equal, we should recommend our clients to accept the lowest tender. It sometimes happens, however, that a time for completion of the job is to be stated with the tender. In such cases of urgency it may be worth extra cost in saving of time and a client would be justified in accepting the best tender on a time basis.

The particular case quoted by your correspondent where a builder favoured by the clients was fourth on the list and was given an opportunity of reducing his price to compare favourably with the lowest tender is, of course, taking a grossly unfair advantage of competitive tendering, and it is to be hoped that such is a very isolated case. Presumably the architect was not in a strong enough position to stand up to his clients and insist upon a fair deal with the builders invited to tender.

It would certainly strengthen the business relationship between builder and architect if the former could be assured of a straight deal regarding competitive tendering, but I am afraid most architects come up against unreasonable clients occasionally and protection is sought behind the usual clause " that the lowest or any tender will not necessarily be accepted." If " Suburban Builder " is not satisfied, his remedy is to refuse to tender in competition.

A. A.

SIR,—I entirely agree with " Suburban Builder " that it is unjust to ask a contractor to tender merely for the purpose of checking another man's price. I do not think any fair-minded architect would do so. Now and then, a client, not realizing all that is involved, may suggest it, but I have always found that he will give way when the unfairness of the proposal is explained.

There is, however, a point of view that is open to argument. Suppose you have five men tendering. Assume that they are all good enough to put on your list and any of them will give you work to which it would be difficult to object on any definite non-compliance with the specification. Nevertheless, no two men are exactly alike, and there may be one who is an artist at his work and sets on it that indefinable touch which lends distinction to the plainest type. In that case would it not be fair to say to the client that the difference is well worth the few pounds that may separate the figures?

You may say, " If so, why ask the others? " to which, of course, the answer is that until you see the relative prices you are unable to say whether the enhanced cost is justified.

If it were known that the choice would be so influenced, it would tend to encourage the better workman. The case may not often arise, but it certainly does so occasionally.

G. REAVELL

SIR,—Architects all realize that if a builder is a suitable person to invite to tender, his tender should be accepted, if the lowest. But difficulties arise when a client has a preference for the work of a particular builder, but insufficient confidence in his willingness to give a keen price without competition. This circumstance should be dealt with in advance by the architect pointing out to his employer that highly skilled and expensive labour is involved in the preparation of an estimate for building work. The building owner only thinks of a merchant who can often make a quotation for the sale of his goods by merely writing a letter involving the use of information already to hand in his office.

My practice is to invite all the builders tendering to send a representative to hand in their tender at the moment of opening. The tenders are passed round and everyone takes a note of the figures, thus avoiding the uncertainty of waiting indefinitely for a knowledge of the result.

All precautions having been taken, there is still the risk of a client insisting on the acceptance of a tender other than the lowest. The architect has, then, to rely on his reputation with the building trade for a fair verdict.

C. C.

QUESTIONS THAT ARISE

Bituminous Paint

S. and G. write: " *We should be glad of your expert's advice regarding the use of bituminous paint. In carrying out some repairs to a large city building of six floors, we are faced with the expense of repainting several iron escape staircases. These have not been painted for some years, and portions of the paint have peeled off and rust has begun to eat into the ironwork. Do these parts require ordinary priming before applying bituminous paint?*

Would one coat effectively cover the existing paintwork? "

Bituminous paint can be satisfactorily applied in two coats to new ironwork, without the usual priming coat.

Unless old painted work is extremely bad, one coat should suffice.

The work should be thoroughly cleaned down, the rust removed with wire brushes, and the bare parts touched up with bituminous paint.

Bituminous paint has very good covering capacity, and lays on thickly. It is most satisfactory for work of this kind—in fact, to any ironwork where a decorative finish is of a secondary importance and cheapness is a necessity.

Whilst manufacturers attempt to combine its preservative powers with decorative qualities, very few colours are obtainable.

To apply ordinary oil paints to ironwork previously treated with bituminous paint, it is first necessary to treat with two coats of knotting.

M. R.

Cavity Walling

B. B. writes: " *I should be glad to have your expert's opinions on the two following practical points in connection with cavity wall constructions:*

1: Is it usual to build the base of a cavity wall in 14-in. brickwork, or to carry the two thicknesses of brickwork down to the concrete foundation?

2: Is it considered advisable to continue the cavity at backs of fireplaces, or to stop the cavity against fireplaces? "

I consider that the better method of construction is to carry the two 4½-in. thicknesses of brickwork down to the concrete foundation, unless the latter is at an unusual depth, and to fill in the cavity with fine concrete to a level of 6 ins. below the damp course. This difference in level should prove a safeguard against dampness rising from moisture penetrating the mortar droppings, which inevitably accumulate at the bottom of the cavity. The practice of building a 14-in. wall nearly up to the dampcourse is wasteful and unnecessary. Despite the fact that a number of architects provide for stopping the cavity at the fireplaces, I consider that it is necessary to continue the cavity behind the fireplaces as well as keeping a 9-in. fireback. By stopping the cavity there is always a possibility of rain finding its way into the walling and showing at the angle between the cavity wall and chimney breasts, a defect which may be encouraged by the nearness of trimming joists to this angle.

W. A. D.

SCHOOL WORK: LONDON

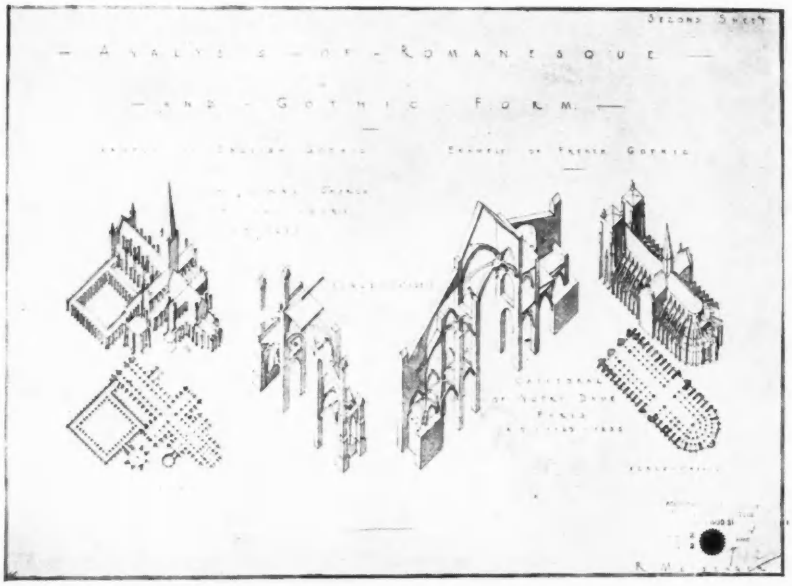
i: Architectural Association

BY M. L. ANDERSON

THE last comprehensive exhibition of A.A. students' work, which was held just a year ago, gave indications that some sort of upheaval was going on in the inwards of the school curriculum; and foreshadowed some developments which, given time to make their way to the surface, should be a great advance not alone in what was being taught, but, more important, in the whole manner of teaching.

Any drastic change, such as is here taking place, must be a gradual one, if it is to avoid breaking the continuity of a course which some proportion of the students have already started; and one of the remarkable points about the present exhibition is the way in which the new regime seems to have permeated even to the advanced years. The senior students, naturally, having been more or less plunged direct into their new mental surroundings without being carefully acclimatized by long association from the very beginning of their course, can only be assumed to have suffered to some extent through having been denied the firm groundwork which has been offered to the lower years.

So far as the standard of work itself is concerned, it is of the normal high quality; but the ingenuity of the method of teaching is not so apparent, and, as a result, it is the lower years which provide the thrill and "punch" of the exhibition.

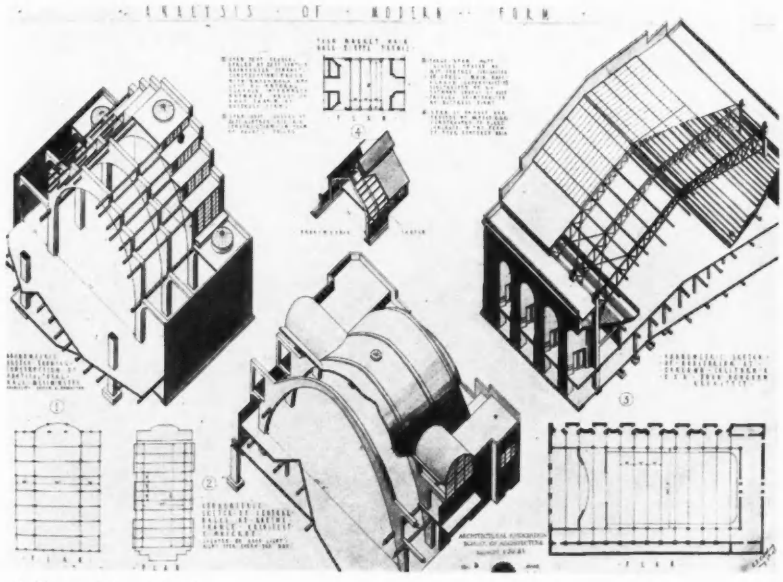


Architectural Association.]

An analysis of vault form. By R. Messenger (second year).

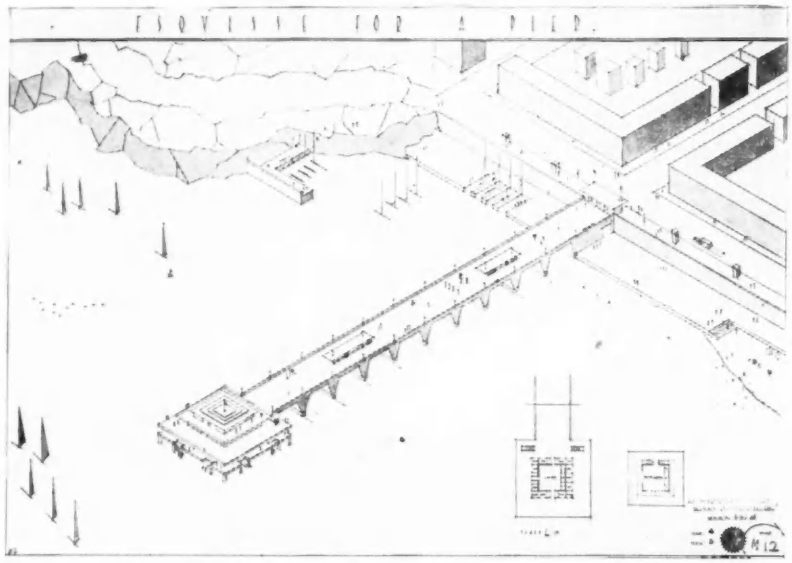
The keystone of the curriculum may be summed up by the single word "synchronization." The course no longer consists of a number of subjects and lectures, each virtually an entity in itself. After the first term of the first year all the drawings which the students produce, all the lectures which they attend, are interdependent and progressive; the construction depends upon the design, and *vice versa*, and both are influenced by the lectures. Instead of setting a subject in design and collecting the completed drawings at the end of a month, thereafter basing a construction subject on the design, it is now realized that nobody can derive real educational value from designing anything and ignoring its construction, any more than he can construct without knowing what it is that he is building.

The A.A. has long been regarded as one of the strongholds of modernism, and quite a number of people have felt a little uncomfortable about it all, and have wondered "where it's all leading to." For these people there is comfort to be had from this exhibition, because here are the Orders, large as life—but the Orders in a new way. They are no longer held up merely as Design with a big D—as forms which are a very present help in trouble. Research plays a very large part in the work of the school, and it may be said that there must be a sound reason for everything which a student does. In the first year the research takes him, for instance, into post and lintel construction, and here he meets the Orders and learns to regard them as design and construction, inseparably welded to produce fine architecture. It may be a matter for speculation as to whether this "fundamentalism," if one may so term it, will lead to the continued use of the classic forms by these students when they get into practice, and, if so, whether they will be intelligently and amusingly used—it will certainly be interesting to watch. But in the meanwhile it is worth pointing out that there are no "-isms" about the A.A. work, and, so far as one can gather, there is no attempt to harp on "styles"; that question is left open for the student, with the reservation that what he does must be based on the logical and reasonable application



Architectural Association.]

An analysis of modern form. By E. T. Dowling (third year).

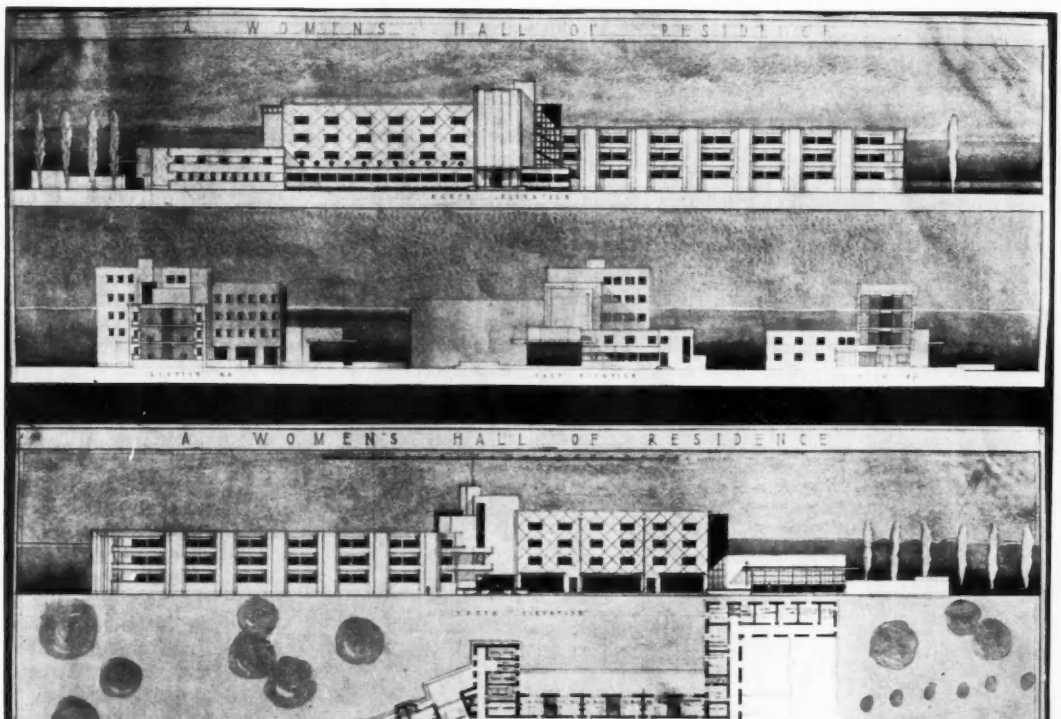


Sketch design for a pier. By G. A. Gamble (fourth year).

of the knowledge gained by research. "Modernism," therefore, may be said to be non-existent, but there is evidence of a leaning towards a knowledgeable or "contemporary" movement.

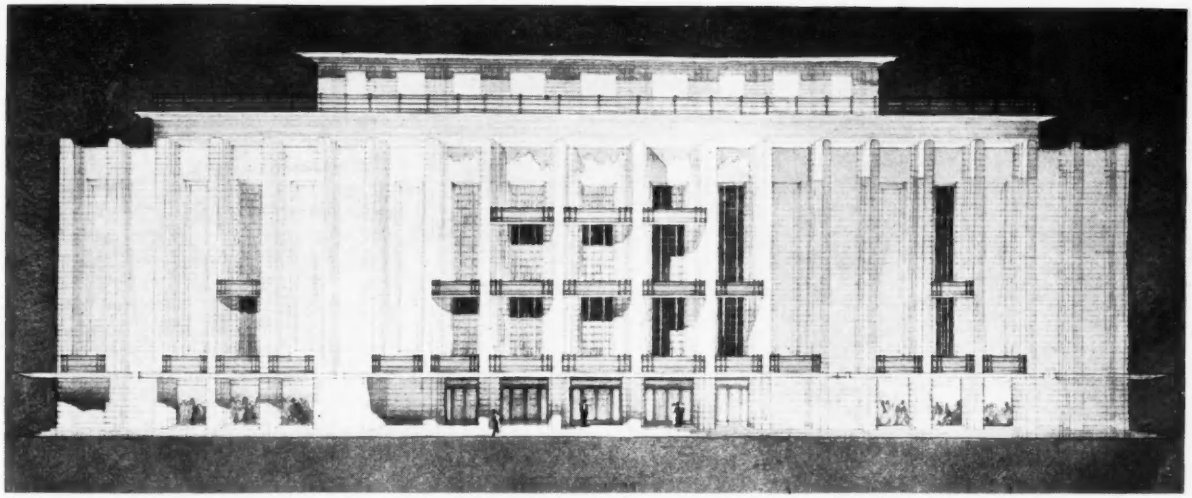
In the second year, design and construction again appear, interlaced; and the traditional aspect of the two is represented by a study of Romanesque and Mediæval work with particular reference to the development of forms and methods of vaulting. Later the same system brings a progressive study of Renaissance design and construction on the same lines and, finally, of modern forms in relation to particular types of buildings.

Any brief summary of the work of the school is liable to leave the impression that the course errs on the side of being too theoretical; perhaps a school should not attempt too far to teach the severely practical, but should concentrate upon those subjects which cannot easily be learnt out of school.



[*Architectural Association.*]

A women's hall of residence. By A. G. Savill (fourth year).



University College : Bartlett School of Architecture.]

An opera house. By R. Seifert.

But an interesting addition to the A.A. curriculum is a series of lectures to advanced students giving a groundwork to the complex subject of building finance.

As a lively adjunct to the exhibition (which remains open until July 24), the booklet describing the work is worthy of note, because it reflects the character of the school by its refusal to accept blindly or unreasoningly the mannerisms by which one is becoming entrammelled. But one criticism of it : the use of thick-bodied sans-serif type faces demands more open leading for legibility's sake.

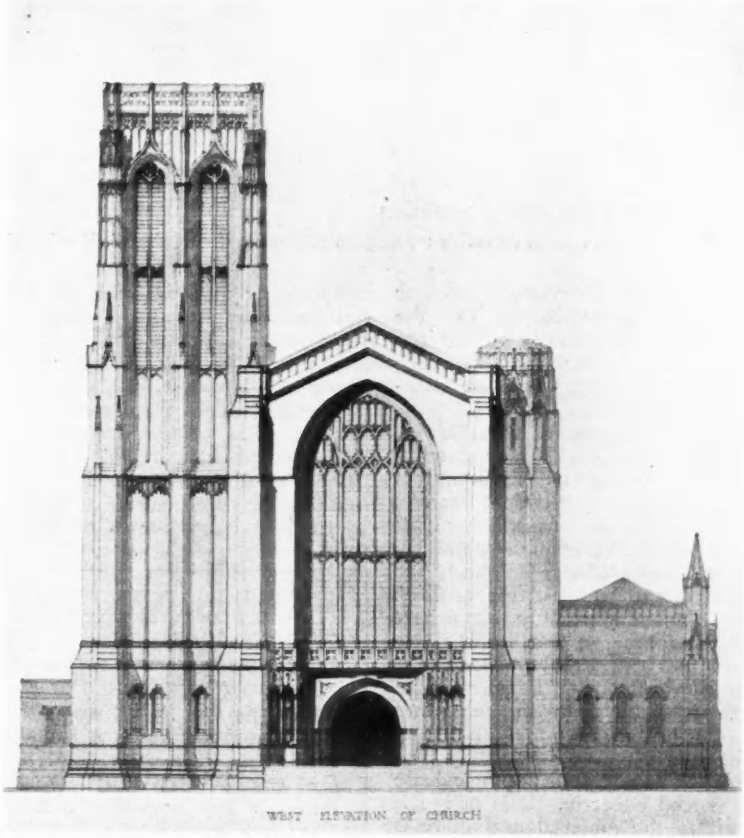
ii : University College

BY JOHN GREENIDGE

NO less a person than Sir Edwin Lutyens has recently stated that the older generation in the profession has misgivings as to the use that is being made by youthful practitioners of the new materials which are now at their disposal, the new needs that have to be satisfied, and the strange sources of ideas which are ready to be tapped. It requires a designer of mature judgment to be able to resolve his knowledge of tradition, modern technical methods and the various mechanical characteristics of his profession and bend them to his artistic will. Today the proper solution of an architectural problem is achieved, through all these complicated conditions, by something akin to a miracle; he must be in the end a sensitive and experienced man to be the vehicle of such a grace.

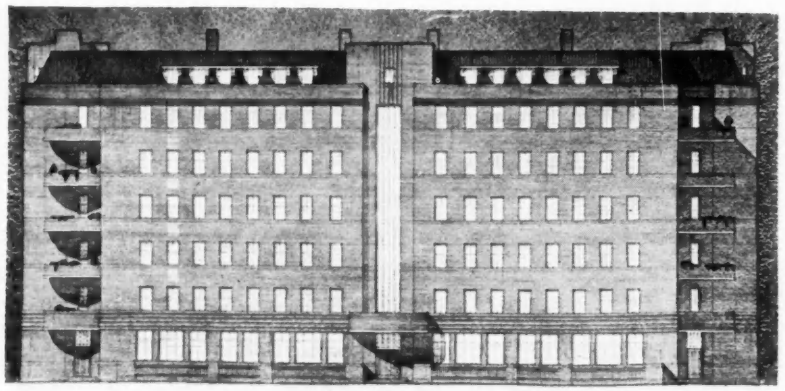
It is inevitable, in viewing an exhibition of students' work, that one should speculate in what directions the future tendencies are going to run, stimulated by what is being taught and encouraged.

In the present exhibition at University College, one recognizes the old sound classical foundation, represented by a brave display of Greek compositions and various adaptations of the pure classical style. Historical development is traced through Renaissance motives until more modern problems have to be tackled. Here one notices a distinct divergence of manner and conception. The Continental treatment of concrete, the mechanized industrial building or block of flats, is well understood, and in most cases ably treated. But one seems to notice in much of this work a dislike of the attitude of cynicism towards the personal factor which has recently been so apparent. Is it possible



University College : Bartlett School of Architecture.]

A town church. By F. E. Kerswill.



University College : Bartlett School of Architecture.]

A small block of flats : front elevation ; and plan of ground floor. By W. Rowley Hall.

that the human element has become too much subordinated to the mechanical pouring-in of concrete into the shuttering? Are we, in fact, returning to a more personal, man-handled architecture?

There are indications that this is where the present-day uncertainty in design lies. But in this exhibition it is refreshing to see mechanical motives kept in their place—that is, being used for mechanical purposes—while in domestic and urban building the rhythm is rounder, less rigid; and the human heart may possibly miss a beat without becoming de-synchronized.

M. F. Sander's Railway Dock is a sound interpretation of the mechanical motif. It is an essay in cleats and gusset-plates, but neat and absolutely to the point. B. J. Ashwell's Fish Market exhibits a perfectly logical use of reinforced concrete. The design is attuned to the material and there is no unpleasant self-consciousness about the building that, as architecture, it is not quite out of the top drawer. In these two subjects one would not expect any particular human factor to be apparent. However, in the design for a Landing Stage for Cross Channel Service it is present by derivation. The concrete hangar which acts as a railway terminus is designed on a train-motif. The marine-motif is expressed by the long barge-lines of the Customs shed and the lighthouse, combining ideas of land and marine transport which are essentially of human scale and value.

R. Seifert's Opera House is a magnificent and ambitious building. But it seems to epitomize all the complications of modern existence. In the mass it is terribly worried, and rather like an old-fashioned radiator in motif. As an important municipal edifice it would have nothing of the calm and strength that is essential to keep order amongst the smaller buildings. Even the figures drawn on the elevation seem almost an impertinence. Magnificent as the conception is, this is not the sort of inducement to the public that grand opera needs, especially in this country.

But, in addition to this idea of what is merely fitting, there seems to be a definite return to old loves for the sake of fresh company. The designs for a Royal Chapel and a Town Church almost all follow mediæval forms which, in a school exhibition, would have caused surprise even three years ago. Here opinion is divided between the Gothic revival revived and the Liverpool-Scott precedent. Of the former type are the designs for a Royal Chapel by E. A. S. Houfe and E. C. O. Farrell. The stuff looks somehow machine-cut and the arcading of a type that one associates with ornamented capital letters in a mid-Victorian book of verse. In C. P. Saurin's Town Church a later aspect of the Gothic revival is illustrated; what might be called the post-Street period of about 1890. The treatment of the same subject by F. E. Kers will is infinitely more successful. Such a modernized form of Perpendicular Gothic is probably the only possible re-rendering of mediæval church architecture.

An interesting solution to a topical problem is provided by W. Rowley Hall's design for a small block of flats. The central staircase feature, with a continuous perpendicular light, which divides the façade into two bays, is particularly successful.

The exhibition is interesting as a study of style, but perhaps this year even more as a study of character.

THE HOLIDAY SKETCHES COMPETITION

The result of the July competition will be announced in THE ARCHITECTS' JOURNAL *for August 12.*

Entries for the August competition should reach the Editor at 9 Queen Anne's Gate, Westminster, S.W.1, by first post on August 17. Motto labels for this competition will be found on page xxxviii.

Competition Result

Mr. E. Berry Webber, A.R.I.B.A., the assessor of the competition for the Corporation Offices, Leicester, has made his award as follows :

First premium (£300), Mr. H. Spencer Silcock, A.R.I.B.A., and Mr. Leonard Barnish, F.R.I.B.A. (Grayson and Barnish), of Liverpool.

Second Premium (£200), Messrs. G. H. Shepherd and J. G. Sidebottom, of London.

Third premium (£100), Messrs. Stockdale Harrison and Sons, and W. F. Cartwright, F. & A.R.I.B.A., of Leicester.

The veranda provides the principal approach to the club-room. Entrances on either side give access to the dressing-rooms.

LOMBARD SPORTS CLUB PAVILION, ELTHAM

DESIGNED BY GORDON AND GORDON

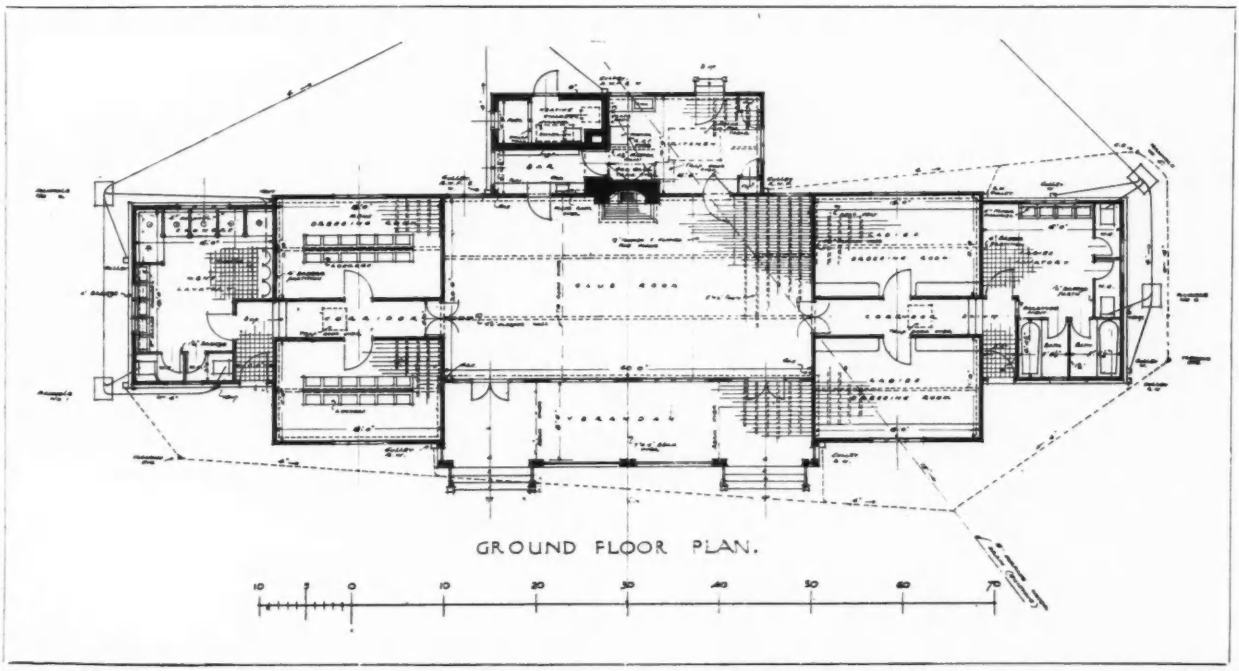
THIS sports pavilion has been erected in Footscray Road, Eltham, Kent, for the Lombard Sports Club. The main front faces approximately north-east, and has been designed with a veranda, 40 ft. long by 8 ft. 6 ins. wide, as the central feature. The veranda is approached by two flights of steps and leads to a club-room, 40 ft. long by 20 ft. wide by 12 ft. high, having a floor of 1¼-in. tongued and grooved pitch pine laid on 5-in. by 2-in. fir joists.

Symmetrically planned on either side of the club-room are, on the left, the men's dressing-rooms and, on the right, the ladies', each dressing-room being 18 ft. long by 11 ft. wide. Beyond the dressing-rooms are the respective lavatories, each having a separate entrance on the principal front from the sports ground.

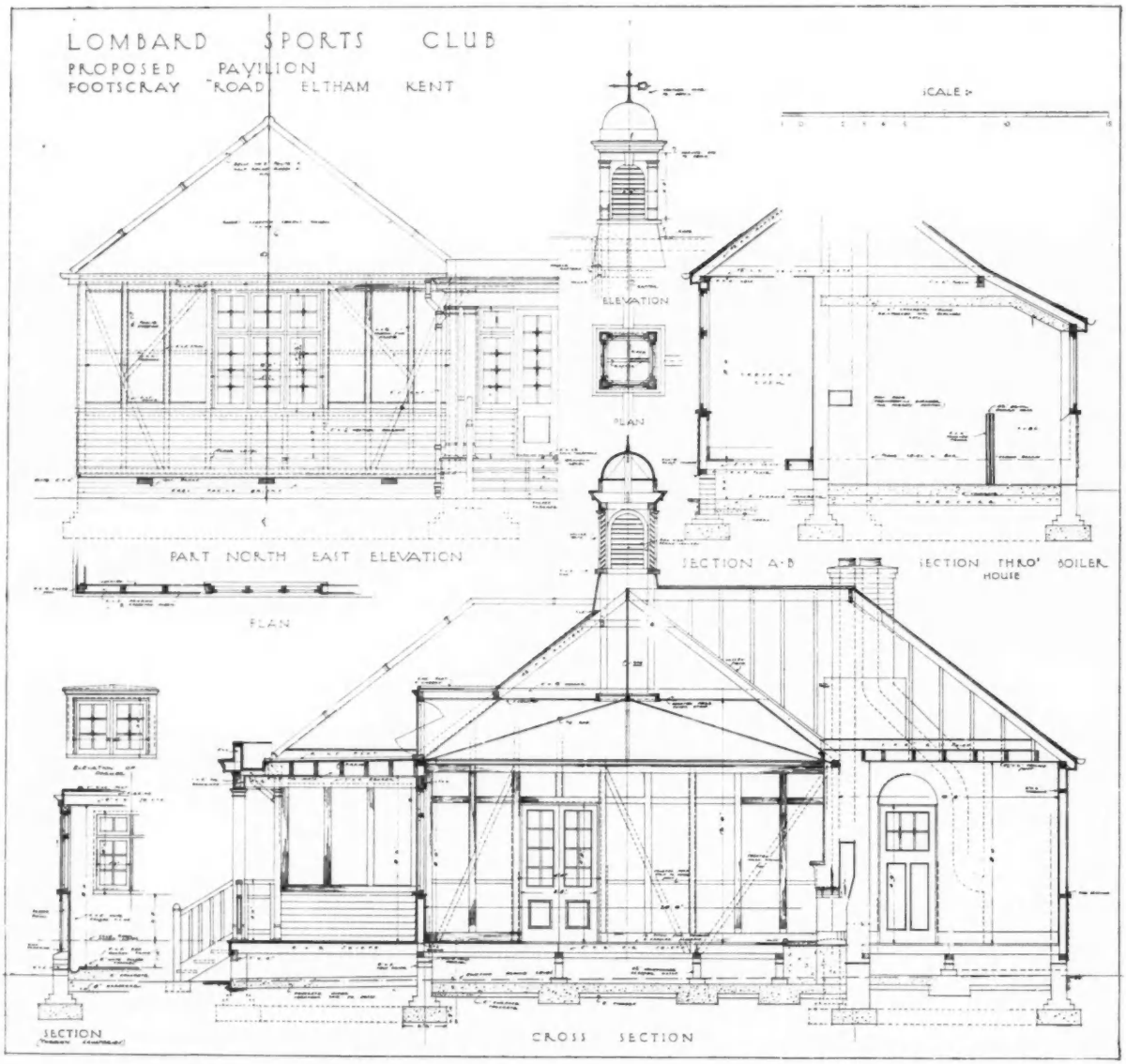
Behind the club-room are a bar, a kitchen, measuring about 17 ft. by 11 ft., heating chamber and fuel store. All of these can be approached also from separate entrances at the rear of the pavilion.

The pavilion is of timber-framed construction, consisting of 4-in. by 3-in. braces and studs, lined on the interior with wallboard, and infilled on the exterior with asbestos sheeting. The base is of weatherboarding, and the roof is covered with asbestos cement Duchess tiles, the whole structure being supported on brick sleeper walls on a concrete foundation.

The pavilion has just been erected at



Ground-floor plan. Approximately the pavilion is 108 ft. long, and has maximum and minimum widths of 45 ft. and 20 ft. respectively.



The architects' working drawings, showing among other details the constructional methods adopted for the timber framing.

a cost of about £3,000, representing approximately 1s. 6d. a foot cube.

It is designed in a direct and simple manner and is intended not only for use as a sports pavilion, but as a social centre.

The club-room. On the right of the fireplace, which faces the screen to the veranda, are the entrance to the kitchen and the doors leading to the ladies' dressing-rooms. On the left is the bar.

A general view of the garden front, showing the simple treatment of the plaster-finished walls, and, on the left, the loggia, enclosed by a sheet of plate-glass.

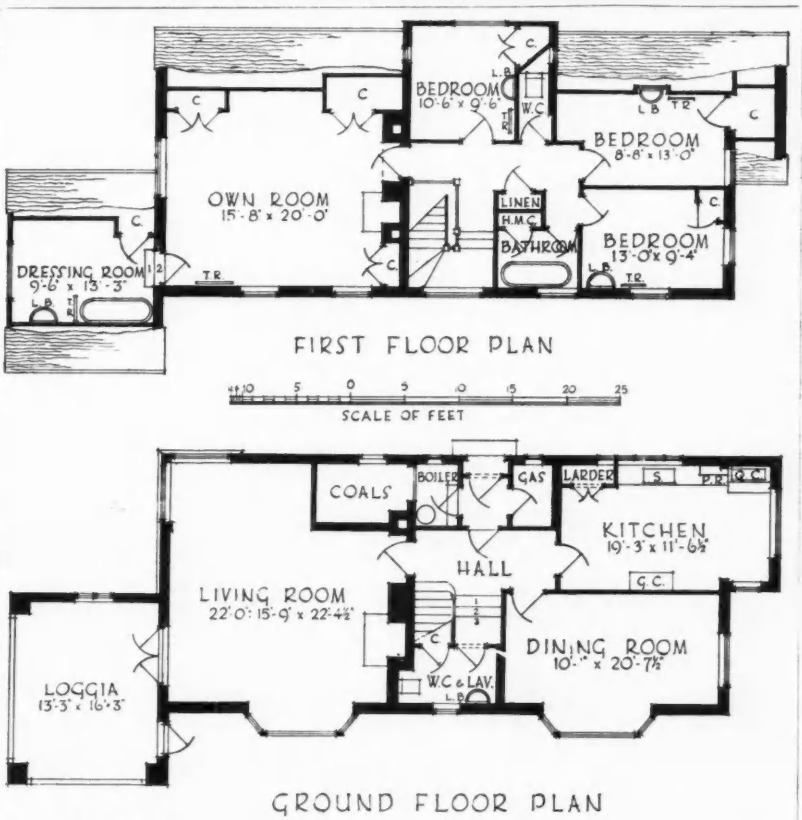
A SMALL HOUSE AT BOSHAM

DESIGNED BY
IMRIE AND ANGELL

"MILL MEADOW" is a small house, compactly planned for easy working, and designed for one of those attractive sites that overlook Chichester Harbour at Bosham. Externally, its walls are plainly finished in plaster, but interest is added by a simple treatment of bands and panels in the plaster. The surface is whitewashed, while the external wood and iron work is painted black.

An interesting point about the ground-floor loggia, which opens out of the principal room, is that it is rendered capable of use all the year round by being totally enclosed, the front opening being filled in with a single sheet of plate-glass. The combined kitchen and scullery has a large washing-up space, and the fixtures are a feature.

Over the living-room is the main bedroom, and, leading out of it, over the loggia, is a dressing-room, with bath and lavatory basin. There are three other bedrooms, all fitted with basins, a linen cupboard and a bathroom. Ample cupboard-room is provided.



C. CUPBOARD.
G.C. GAS COOKER
Q.C. "QUICKSEY" CABINET
P.R. PLATE RACKS
S. SINK
L.B. LAVATORY BASIN
T.R. TOWEL RAIL

Ground- and first-floor plans. From the central hall the stairs lead up to a landing, also central: the key to particularly compact and convenient planning.

(Pencil : 8½″ × 14″)

St. Laurent, Rouen.

(Etching : 9¼″ × 5¾″)

The Quay, Honfleur.

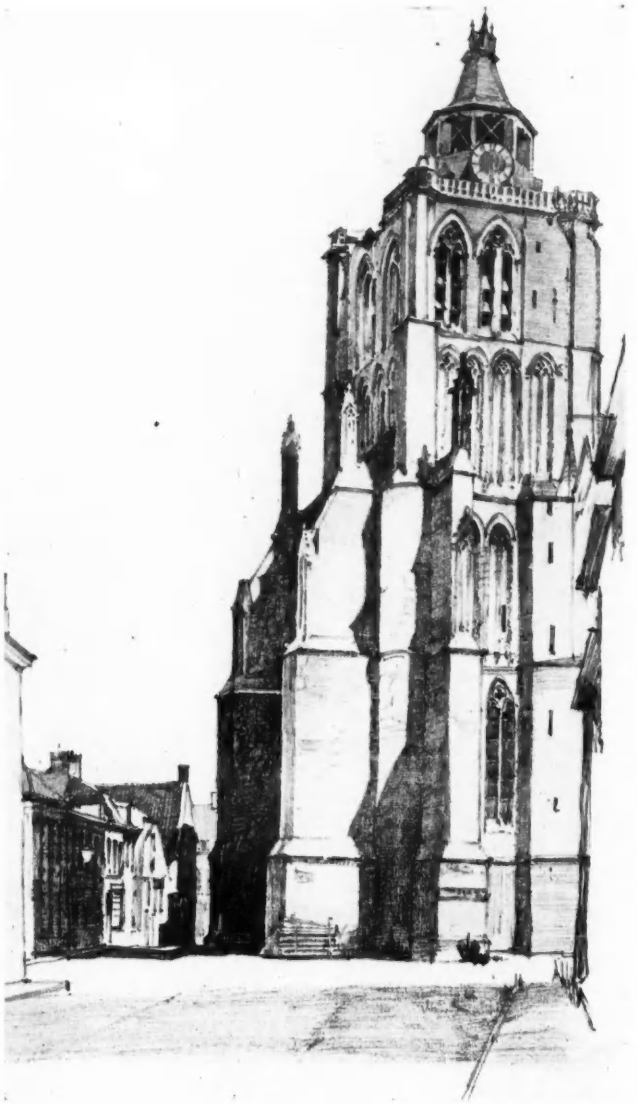
(Pencil : 6¾″ × 12¼″)

Arras Cathedral, 1917.

THE SKETCH CLUB

THIRTY-FOURTH SESSION

BEING ETCHINGS AND PENCIL DRAWINGS BY W. H. ANSELL.

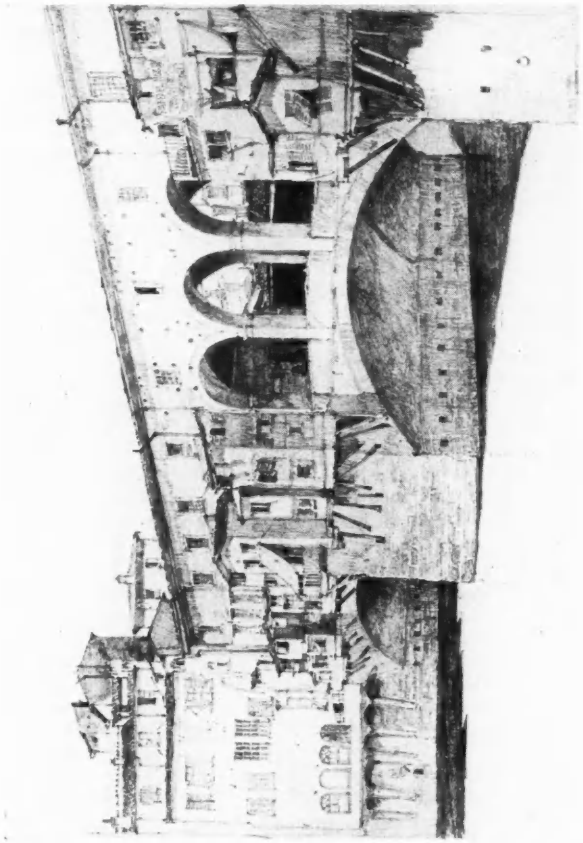


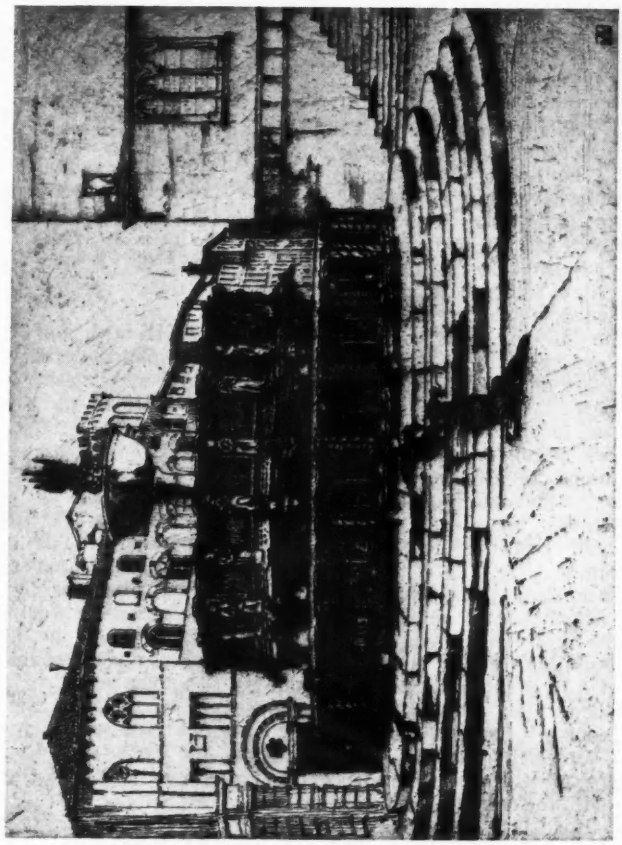
(Pencil : 8½″ × 14″)

St. Bertin, Poperinghe.

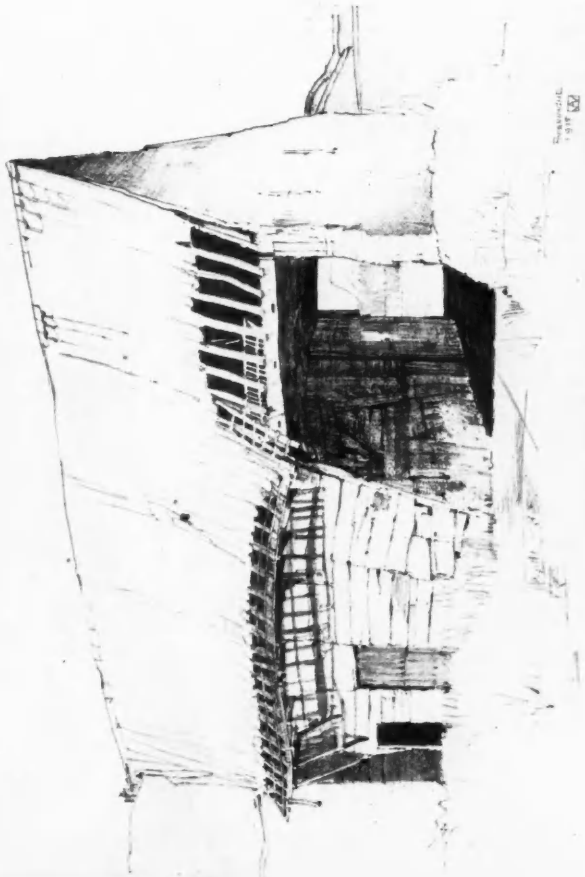
(Pencil : 11½″ × 7½″)

Ponte Vecchio, Florence.





The Fountain, Perugia. (Etching: 9¼" × 7")



Barn at Poperinghe. (Pencil: 14" × 9¼")

LITERATURE

LAMINATED BOARD AND ITS USES

THIS treatise on laminated board is a collection of contributions which, had he lived, Sir Lawrence Weaver would have himself published in something of the form which Mr Christopher Hussey has given them.

They serve to remind us how much we have lost, architects, craftsmen and laymen, by the untimely death of one who did so much to unite us in the common appreciation of good things. That quality of easy exposition that always masked his complete grasp of a complicated technical process, places this last work among his most notable contributions to architectural journalism. Here is a material about which most architects know little or nothing, and would continue to know little or nothing, were it not for this treatise and others that will no doubt follow it. It is a strange material, bringing with its new processes of manufacture infinite possibilities of new and varied design; yet to this slim volume little could be added that would not repeat or elaborate what has been already said.

Chapter I. describes the manufacture of laminated board, connecting it with the earlier practice of veneering, of which it is a logical extension, into the twentieth century.

As one reads this chapter one begins to appreciate, through an understanding of its manufacture, some of the virtues and qualities peculiar to this material, so that when, in the later chapters, its use by modern designers is discussed, one realizes at once how it comes about that the best examples have a character unlike that of any woodwork that has gone before. One senses both its possibilities and limitations.

The range of illustration is wide, despite the novelty of the material, and covers, with, of course, furniture design, the interior decoration of ships and buildings of all sorts.

Sadly enough, we have to look to Sweden and Germany, to the *Kungsholm*, the *Bremen* and *Europa*, for the most beautiful examples of laminated wood. The *Kungsholm* is now well known enough to English architects, but the *Europa* and *Bremen* provide photographs of interiors quite new, at least to me.

The Swedish Match Company's headquarters and Asplund's Stockholm library are both buildings which can show laminated board being used in an entirely understanding way, giving an air of modernity even when the design looks backwards rather than forwards for its motifs.

In furniture alone, it seems, have English designers shown a selective and appropriate sense of this new material. If only a good English architect could design the interiors of a new English ship, the art would take a great stride forward. E. M. F.

Laminated Board and Its Uses. By the late Sir Lawrence Weaver, K.B.E., F.S.A. London: The Fanfare Press. Price 7s. 6d. net.

ROOF TILING

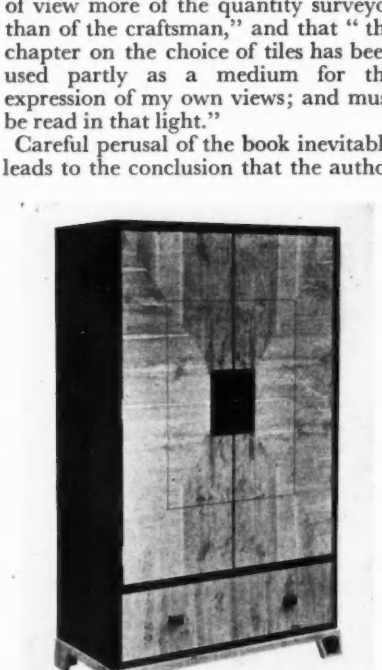
THE author of this book, who holds diplomas of the Surveyors', Engineers' and Sanitary Institutes, is head of the building and surveying department at Croydon Polytechnic. The ground covered includes 1: A Short History of the Craft; 2: An outline of Modern English Methods of Manufacture and of Modern Practice; 3: Hints on Choosing a Tile and on Writing a Tiling Specification; 4: Methods of Measuring Roof Tiling. The book is addressed to quantity surveyors and members of the building profession, and is illustrated by twenty plates from photographs, two folding sheets of drawings and thirty-one figures. A foreword by Sir Edwin Savill introduces the book as "an authoritative textbook" on roof tiling and worthy of acceptance as "a standard textbook on the subject." In the preface the author states that the chapter on Modern Practice is "from the point of view more of the quantity surveyor than of the craftsman," and that "the chapter on the choice of tiles has been used partly as a medium for the expression of my own views; and must be read in that light."

Careful perusal of the book inevitably leads to the conclusion that the author has little acquaintance with the better class of building and of its craftsmanship, but even a casual glance at the photographic illustrations of roofs would have led to this conclusion. The illustrations of tiling in Plates Nos. xvi, xvii and xviii show work carried out after the manner of the speculative builder, of which countless examples may be found in the neighbourhood of Croydon. Unfortunately, most of the technical schools propagate this class of craftsmanship. The standards of design of subjects set for practice are bad, and these, being assimilated by pupils, are reflected in their subsequent daily works. Much of the matter in Mr. Dobson's book is useful, but it "lacks the one thing needful" which is the setting of a high standard of craftsmanship.

The chapter on Manufacture is, perhaps, the best short summary of tile-making processes that has been written. The twelve plates of tiles (each half full size) by which it is illustrated bring out the several textures of each make of tile shown, and are silent testimony to the virtue of coarse sanding, but, of course, give little idea of colours. One feels that the same number of plates would have been used more profitably to illustrate details of construction, of which only verbal descriptions are given.

It is in the chapter on Modern Practice that the conventional outlook of the author is proclaimed, although from the restricted point of view of strong workmanship he is sound enough. Open battening is commended as "the ideal form of preparation for plain tiling," subject to "danger from driving rain." Assuming a pitch of not less than 45 degrees (the usual minimum) the danger is not from rain but from fine driven snow, which may be blown under the tiles and, in melting, drip inside the building. The prevention of this was the chief reason for such crude devices as bedding in mortar, torching, etc. Again, boarding, felting and battening is stated to be "an excellent form of preparation for plain tiling," and the addition of counter battens or counter laths is recommended "where considerations of cost will allow." The omission of counterlaths or counter-battens should *never* be condoned, because for lack of these all moisture passing the tiles will lie on the ledges formed by the tile battens, instead of running down to the eaves.

Other instances show ignorance of detail, as on page 39, where an imaginary difficulty of a "step" between the valley-board and tile battens is to be "eased" with feather-edged boarding each side. To have drawn a section would have shown the futility of this provision. Frequently, terms employed are the author's own



[*From* Laminated Board and Its Uses.

Wardrobe of Ibus laminated board veneered with yew and ebony. Designed by J. Dugald Stark.

rather than those current in the building trades, but his meaning is never thereby obscured. Some useful information is given respecting light passed through glass tiles, but, had the author realized that these are only tolerable when symmetrically arranged, as in a diamond, he might have condensed his table considerably.

The chapter on specifications is a valuable one, because it treats in detail what most textbooks pass over or specify briefly. There are, however, important omissions: as in failure to specify treatment of the final or heading course of vertical tiling, for lack of which a contractor would probably cobble the work, either by using a full length tile and so not keeping the gauge or by rendering the upper six inches of such a tile with mortar listing, with or without combed ornament. The specification should require the gauge to be kept also under window sills, etc., and state how this is to be accomplished, and exactly what modified gauge is required for heading courses. There are several better methods of stopping ends of ridge tiles than that specified, the illustration of which on Plate xviii is a deplorable piece of work, as, also, is the lump of mortar between the eaves course and the lowest hip-tile—not mentioned in the specification.

The chapter on "The Science of Roof Measurement" develops a subject which has some novelty. The author shows that not only does the area of a hipped roof equal the area of a gabled roof of the same pitch covering the same plan, but that "on any given plan, there may be made any number of different arrangements of sloping surfaces of any given pitch, and all of them will have the same area." The proof of this he demonstrates by a variety of instances of which he gives diagrams.

NATHANIEL LLOYD

Roof Tiling. By C. G. Dobson. London: Crosby, Lockwood & Son. Price 12s. 6d. net.

THE EARLY AGES

IT is no doubt true, although it is sometimes forgotten, that history and pre-history are very different things. The presence or absence of written records is what makes the difference between the two. But this does not mean that prehistoric research can rightly be despised. After all, if earthworks, weapons, and cave drawings are discovered, they must have been produced by human agency, and certain deductions can be drawn from them. It is the irresponsibility of some investigators in making these deductions that has tended to discredit this type of research.

Such pitfalls are almost wholly avoided by Mr. and Mrs. Quennell in their excellent little work on some of the later "ages" of prehistoric times. Although intended primarily for public schoolboys—and girls—it is distinctly the type of book that can bring pleasure and profit to adults as well; which is another way of saying that it keeps to facts together with reasonable deductions, and that its style is simple and readable without being childish. Perhaps, however, there is too great a tendency to use terms such as "Nordic," which have very little real meaning, or relation to fact.

Basing their description of the daily life of the periods with which they deal on the traces and relics which the people concerned have left behind—but rightly insisting that in archæology people are more important than things—the authors treat of such subjects as housing, cooking, clothing, warfare and social life.

In some very sane remarks on the religious ideas of prehistoric man, the reader is warned against misinterpreting such a feature as human sacrifice, which, however rightly repulsive to ourselves, may have its origin in sound, although often perverted, instincts.

A practical characteristic of the book is found in the fact that examples are taken, whenever possible, from our own country; such are Badbury Rings, Stonehenge, Maiden Castle, and many others. The illustrations deserve high praise, whether they are pictures of actually existing things or skilful, but not too fanciful, representations of aspects of prehistoric life. As examples we may select the exquisite leaf-shaped sword (figure 45), and the hut interior at Glastonbury (figure 66).

Of direct architectural interest there is, naturally, not very much to be found here; but the description of man's early efforts to grapple with the necessity of shelter takes us back to first principles—an excellent thing if we are to keep near to Nature amidst the legitimate developments of art.

F. D.

Every-day Life in the New Stone, Bronze and Early Iron Ages. Written and illustrated by Marjorie and C. H. B. Quennell. B. T. Batsford, Ltd. Price 5s. net.

THE NINETIETH BIRTHDAY OF "PUNCH"

THE issue of *Punch* for July 15 is a Special Ninetieth Birthday Double Number, with a charming cover design by Frank Reynolds, showing the presentation of a Birthday Gift to Mr. Punch by his grandchildren.

The principal cartoon is by Sir Bernard Partridge and is entitled "Memories." It depicts Mr. Punch showing his gratitude to some of those celebrated contributors who have helped him in the past. The special commemorative section is the work of "E. V. L."

The period covered by the survey is practically that of the reign of His Majesty the King. The history of this most eventful period is told in a most entertaining manner and is copiously illustrated. The Coronation of the King is one of the earliest items, followed by a glimpse at the "Votes for Women" campaign—in a picture of a window-smashing incident—the loss of the *Titanic* and the tragedy of the Scott Expedition.

Then comes the stupendous event of the Great War. F. H. Townsend's well-known cartoon, "Bravo, Belgium!" is reproduced, showing the gallant resistance to the invader, with Frank Reynolds's "Study of a Prussian household having its morning hate," and a picture by Fred Pegram.

References are made to enlistment, food coupons and regulations, battles, domestic privations good-humouredly borne, and many other details which will remind readers of those tragic years. Then we have the Armistice, followed by the blessings of peace, with a surfeit of strikes, culminating in the General Strike of 1926. The progress of the conquest of the air is noted in the achievements of Sir Alan Cobham, Lindbergh and Hinkler. The accession of Labour to office and, in the international field, the Kellogg Pact, are mentioned. The issue is priced at 1s., and every lover of *Punch* should make sure of securing a copy.

OBITUARY

STEPHEN SHAW: 1846–1931

WE regret to record the death, which occurred on July 15, of Mr. Stephen Shaw, F.R.I.B.A., of Kendal, in his eighty-fifth year. Born at Kendal in 1846, Mr. Shaw was educated at Kendal Grammar School under Mr. James Whittaker, and received his architectural training from his eldest brother, Mr. Richard C. Shaw. After his brother's death at the age of thirty, he successfully continued for over fifty years the practice already established.

During his long business career he designed many of the principal buildings in Kendal, including the Town Hall, the Grammar School and headmaster's house, the Zion Congregational Church, the Presbyterian Church, the Allan Technical Schools, the Museum, the old Post Office, and the old Public Library. He was also responsible for the design of many buildings outside Kendal.

He was elected a Fellow of the R.I.B.A. in 1889.

ARCHITECTS' WILLS

Mr. Frederick Edward Fellows Bailey, F.R.I.B.A., of The Poplars, Mellish Road, Walsall, left gross estate of the value of £27,999 (net personalty, £2,518).

Mr. Robert James Rich Beswick, of Swindon, left £6,129 (net personalty, £6,074).

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Town and Country Planning Bill

THE Town and Country Planning Bill has passed its Committee stage in the Standing Committee of the House of Commons, and, in the autumn, will come before the House for report and third reading. It will then come before the House of Lords.

Housing (Rural Authorities) Bill

Mr. Greenwood, the Minister of Health, announced that Sir Tudor Walters would be the chairman of the new advisory committee under the Housing (Rural Authorities) Bill. He added that no payment for services would be made to the chairman or other members of the committee, but any travelling or subsistence expenses required to be incurred would, of course, be refunded.

The Waterloo Bridges

Mr. Mills asked the Minister of Transport what work, if any, was proceeding on the damaged portion of Waterloo Bridge; for how long a period was there a guarantee of safety with the temporary bridge; and whether any steps were contemplated for the demolition of Waterloo Bridge.

Mr. Morrison said he was informed that apart from occasional maintenance repairs to the temporary staging, no work was at present proceeding on the damaged portion of Waterloo Bridge. The most perishable portions of the temporary bridge were the pile supports, which, he understood, should have a life of ten years without repair. They had now been in use for seven years. He was not aware of any steps in contemplation for the demolition of Waterloo Bridge pending a decision on the proposed new road bridge at Charing Cross.

Charing Cross Bridge: Financial Considerations.

During a debate on the vote for the Ministry of Transport, Mr. Morrison said that he had received a letter from the Clerk of the L.C.C., intimating the decision of the Council on the matter of Charing Cross Bridge, and asking if the Government approved of the scheme, and would be prepared to make a grant of 75 per cent. of the cost. The matter, said Mr. Morrison, would be considered by the Government, but he must point out the serious nature of an expenditure of this kind at a time when great difficulty was being experienced in the field of national finance. An outlay of £12,500,000 was a matter that must be considered with a deep sense of responsibility at the present juncture. He hoped, however, that a decision would be reached at an early date.

Progress of the New League of Nations Building

Mr. Dalton, Under Secretary for Foreign Affairs, informed Mr. Mander that work on the excavations and foundations of the new League of Nations building at Geneva was begun on March 1 last, and was progressing steadily. The time allowed for the work under the contract was eighteen to twenty months. He believed that five architects were in control of this work. He would convey to the Foreign Secretary a suggestion that one architect should be appointed in charge to see that the work was really pressed forward in a proper manner.

Preservation Work at Acton Burnell

Mr. Mander asked the First Commissioner of Works if he would state what steps he was taking to preserve the castle and tithe barn at Acton Burnell where the Lords and Commons sat at the assembly of Parliament in 1283.

Mr. Lansbury said that the castle of Acton Burnell was now in the charge of his Department and the necessary work of preservation was in hand. His Department was not in charge of the barn. He was informed that very little was left of the latter structure, but he would inquire whether any steps need be taken to preserve what was left.

Proposed New Railway Station

The House of Lords has held up the passage of a Bill promoted by the London Underground Group of Electric Railways which, among other things, provided for the building of a railway station on Camberwell Green. Lord Dickinson said that, as the Green came under the Act for the protection of London squares, he thought the local borough council had no authority to sanction building on it.

Lord Crawford described the proposal as an outrage, and hoped that the Bill would be recommitted so that the proposals could be fully examined.

Eventually, the debate was adjourned to allow consideration to be given to the proper course to be taken.

SOCIETIES AND INSTITUTIONS

MANCHESTER ARCHITECTS' SUMMER VISITS

THE first of the Manchester Society of Architects' summer visits was held on Wednesday evening, July 15.

The building visited was the New Manchester Grammar School, now nearing completion, the associated architects being Mr. Francis Jones, F.R.I.B.A., and Messrs. Thomas Worthington and Sons.

The historic buildings of the Grammar School in the centre of the city are being vacated in favour of a more airy situation in Fallowfield, where playing fields can be obtained in close proximity to the School. The opportunity has been well used by the architects in the design of a fine group of buildings, culminating in the great Memorial Hall.

A large number of members were present and made an exhaustive and most instructive tour of the buildings.

An interesting programme of visits has been arranged by the Summer Visits Committee of the Society, which will afford the members opportunities of inspecting buildings, both old and new, which are included in the list.

THE WELSH SCHOOL OF ARCHITECTURE CLUB

About thirty students of the Welsh School of Architecture, Cardiff, spent the day in London on July 15, accompanied by Messrs. W. S. Purchon, M.A., A.R.I.B.A., the head of the school, Mr. Lewis John, M.A., B.ARCH., A.R.I.B.A., and Mr. A. MacLean, B.A., A.R.I.B.A.

The party first visited the Architectural Association, Bedford Square, where they inspected a comprehensive exhibition of the work of the students in each year of the Five Years' Course, the work and the methods employed in producing it being explained by Mr. Howard Robertson and other members of the staff.

The party were entertained to lunch by the Architectural Association. Mr. W. S. Purchon proposed, and Mr. J. P. Ward (vice-chairman of the Welsh School of Architecture Club) seconded, a vote of thanks to the A.A. for its hospitality, and to the Principal and other members of the staff for the excellent arrangements which had been made. Mr. F. R. Yerbury responded.

The visitors were then taken on a tour of a number of modern London buildings, including the British Museum extension, Adelaide House, Bush House, the B.B.C. Headquarters, Grosvenor House, Dorchester Hotel, the Underground Building, Westminster, and the Royal Horticultural Hall.

THE BARTLETT SCHOOL OF ARCHITECTURE

The following awards have been made at University College, London, in the Faculty of Arts—Bartlett School of Architecture:

Entrance Exhibitions: 1st, A. G. Ling, Christ's Hospital; 2nd, N. E. Block, Whitgift Middle School, Croydon; *Proxime accessit:* S. P. Jewitt, William Ellis Endowed School, Gospel Oak.

Donaldson Silver Medals: F. E. Kerswill and C. P. Saurin—subject to confirmation by the R.I.B.A.

Herbert Batsford Prize: Dorothy V. Cargill.

The Architects' Journal Prize (for the best final design produced in the Day School by

a fourth-year Degree or Diploma Student) : A. G. Wise.

The Builder Prizes (for the best sets of measured drawings of old work) : Senior—1st, P. B. Dunham; 2nd, A. G. Wise. Junior—R. H. C. Finch and S. Sanmuganathan (equal).

Building Prize (for best set of drawings, combining construction and design, by a fourth-year student) : R. Seifert.

Prize for Design in Ferro-Concrete : 1st, D. A. Stewart; 2nd, W. M. Goode-Smith.

The following have obtained the Certificate in Architecture : P. B. Dunham, D. C. Earle, R. H. C. Finch, E. A. S. Houfe, R. H. Martin, M. Packer, N. F. Sanders, R. Seifert.

The following have obtained the Certificate in Decoration : Agnes K. Johnston and Mary E. Wilson.

The following have obtained the Certificate in Town Planning : F. G. Costello, W. A. Eden, P. V. Mauger.

BRISTOL ACADEMY OF ARCHITECTURE

At the annual exhibition and prize-giving of the Royal West of England Academy School of Architecture, held at Bristol, Mr. W. J. Stenner, F.R.I.B.A., who presided, said a confidential report from the Educational Board of the Royal Institute stated that the Visiting Board were very much impressed with the work of the school. They offered no adverse criticism, made one minor criticism of a helpful character, and expressed pleasure at the high standard of draughtsmanship maintained. He contrasted the conditions enjoyed by the modern architectural student with those prevailing a century ago, when much depended on the man to whom the student was articled. Today the risk taken was not quite so serious, for should the architect principal be not all that was desirable, the school counteracted any bad architectural influence. "The founders of this school," he continued, "were all practising architects and adopted a dual system in a curriculum which allows simultaneous training in school and office."

Mr. G. D. Gordon Hake, F.R.I.B.A. (Headmaster), in the course of his annual report stated that the numbers at the school were about the same as last year, but judging by the inquiries and bookings there would be an increase next year, which would raise the question of additional accommodation at the school, where already they were cramped.

Councillor Walter Bryant, in distributing the awards, congratulated the school on its progress during the year, and said nobody could have anticipated a more satisfactory report. He remarked that it was rarely that an architect could put his or her best thought into action. Economy today was so interpreted that he feared posterity would sit in severe judgment on them in respect of modern buildings.

In conclusion he addressed the students upon the importance of selecting the right materials in carrying out their work.

The prizes were awarded as follows :

Savory Design Medal—A. R. Taylor; Mrs. Yda Richardson's bursary for fifth year—A. R. Taylor; Dame Janet Stancomb-Wills travelling studentship (£25)—E. W. Ayre; Architectural Association Design Prize (£5 5s.)—P. K. Pope; Chairman's prize for best second place—T. H. B. Burrough; R.W.A. Silver Medal and B.S.A. Prize of £3 3s.—W. R. Stenner; R.W.A. Bronze Medal and B.S.A. Prize of £2 2s.—A. E. Carter; Headmaster's Prize (£2 2s.) for most marked progress—Miss K. Gibbons; Eustace Button Measured Drawing Prize (£2 2s.)—P. K. Pope.

COCKERELL'S WATER-COLOUR DRAWING

The famous water-colour drawing by Professor C. R. Cockerell, R.A., representing all the buildings of Sir Christopher Wren in a composition dominated by the dome of St. Paul's Cathedral, is now on exhibition in Sir John Soane's Museum, Lincoln's Inn Fields, W.C.2, and will be on view until August 28. It has been lent by Mrs. F. Pepys Cockerell for the purpose of a reproduction as the frontispiece to vol. ix of the Wren Society, dealing with the fifty-four churches that Wren built after the Great Fire of London.

The Museum is open free on Tuesdays, Wednesdays, Thursdays and Fridays, from 10.30 a.m. to 5 p.m.

THE ARCHITECTS' DIARY

THURSDAY, JULY 30
NATIONAL PORTRAIT GALLERY, St. Martin's Place, W.C.2. Lecture on "Inigo Jones." By John Steegmann, M.A. **3 p.m.**

SATURDAY, AUGUST 1
Sunrise, 5.22 a.m. Sunset, 8.50 p.m.

MONDAY, AUGUST 3
Bank Holiday.

SATURDAY, AUGUST 8
Sunrise, 5.33 a.m. Sunset, 8.38 p.m.

FRIDAY, AUGUST 14
ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, Bloomsbury, W.C.1. Last day for submission of photographs for the Society's Annual Exhibition.

SATURDAY, AUGUST 15
Sunrise, 5.44 a.m. Sunset, 8.24 p.m.

MONDAY, AUGUST 17
Closing date of THE ARCHITECTS' JOURNAL July Holiday Sketches Competition.

SATURDAY, AUGUST 22
Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

SATURDAY, AUGUST 29
Sunrise, 6.5 a.m. Sunset, 7.55 p.m.
ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1
INTERNATIONAL ILLUMINATION CONGRESS. London, Glasgow, Edinburgh, Sheffield, Buxton, Birmingham and Cambridge. Until September 19.

SATURDAY, SEPTEMBER 5
Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7
SANITARY INSPECTORS' ASSOCIATION, 27 Moreton Street, S.W.1. Annual Conference. Bridlington. Until September 12.

SATURDAY, SEPTEMBER 12
Sunrise, 6.28 a.m. Sunset, 7.24 p.m.
ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

THURSDAY, SEPTEMBER 17
Closing date of THE ARCHITECTS' JOURNAL August Holiday Sketches Competition.

FRIDAY, SEPTEMBER 18
NATIONAL SMOKE ABATEMENT SOCIETY, 23 King Street, Manchester. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19
Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

COMPETITIONS OPEN

July 31.—Sending-in day. Proposed Nurses' Home at the Royal Asylum, Montrose. Limited to architects practising in the counties of Aberdeen, Angus, Fife, Kincardine and Perth. Assessor : John Watson, F.R.I.B.A. Premiums : £75, £50 and £25. Conditions, etc., obtainable from C. K. Alexander, Clerk and Treasurer, Royal Asylum, Montrose.

August 27.—Sending-in day. Proposed all-Scottish House for the Ideal Home Exhibition. Limited to architects practising in Scotland or of Scottish birth. Assessor : John Watson, A.R.S.A., F.R.I.B.A. Premiums : £150, £100 and £50. Conditions, etc., obtainable from *The Daily Mail*.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor : Andrew N. Prentice, F.R.I.B.A. Premiums : £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor : Francis Jones, F.R.I.B.A. Premiums : £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors : Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums : £400, £300, £175, and £100. Conditions, etc., were obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor : Sydney Tatchell, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius from Liverpool Town Hall. Assessor : A. H. Moberly, F.R.I.B.A. Premiums : £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions : August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1 Assessors : Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium : £500; also a further amount of £750 will be awarded to other designs according to merit.

LAW REPORT

SPECIFIC PERFORMANCE : AN UNDISCLOSED COVENANT

Charles Hunt, Ltd. v. *Palmer. Chancery Division. Before Mr. Justice Clauson*

THIS was an action by Charles Hunt, Ltd., of Brownhill Road, Catford, against Arthur Horace Palmer, of Hither Green Lane, for specific performance of an agreement dated January 21, 1931, for sale by the plaintiffs to the defendant of certain leasehold premises, 238 and 240 Brownhill Road, Catford, for £725.

Plaintiffs are the owners of the leasehold premises in question held by them on lease from 1919 for the residue of the term from December, 1918. Plaintiffs' case was that the defendant purchased the property for £725 and paid a deposit of £72 10s. Plaintiffs alleged that the defendant accepted the title and had refused to carry out the agreement.

Defendant said the property was offered for sale by auction on January 21, 1931, being described as valuable leasehold premises, two spacious shops and ground-floor factory. Defendant was a dairyman and he said the description of the premises implied that any business could be carried on there. Neither at the auction nor at any time was reference made, the defendant said, to any unusual covenant in the lease under which the property could only be used for the purpose of a ladies' clothing factory, unless the leave and license of the freeholders were obtained. Defendant bid £725 for the property, and his intention was to use the property for the purposes of his business, subletting the shops. Defendant said no disclosure was made of the unusual covenant. He denied that he ever accepted the title. Defendant now counter-claimed for a rescission of the contract and the return of the deposit.

Mr. A. J. Spencer appeared for the plaintiffs and Mr. C. D. Myles for the defendant.

His lordship, in giving judgment, reviewed the facts of the case and said the question was whether in the circumstances the plaintiffs were entitled to require the defendant to take the property. The defendant was a dairyman and his lordship had no doubt that if he purchased the property it was with the idea of using it for his business. Here there was a covenant that the premises were only to be used for a ladies' clothing factory, and it was clear that the defendant would not have bid for the property if he had known of this covenant. The plaintiffs had replied to the defendant that the leases were with their solicitors and were available to be seen. His lordship did not take the view that this was a disclosure of the covenant. He came to the conclusion that the action failed and would be dismissed with costs. The counter-claim also failed, and there would be judgment for the defendant on the counter-claim, with costs. The defendant would be entitled to the return of his deposit.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

New Blue Coat School, Edgbaston, Birmingham (pages 134, 137–140). General contractors, J. B. Whitehouse and Sons, Ltd. Sub-contractors : Ellis Partridge & Co., facing bricks; Wragge and Son, stone; Kleine Co., Ltd., fireproof construction; Blockley, tiles; Wormells, slates; Merrick and Heath, glass; H. Hope and Son, Ltd., patent glazing and cast lead; Hollis Bros., wood-block flooring; Marbello Co., small quantity of patent flooring; Hopes Heating and Lighting Co., Ltd., central heating and boilers; Parker Winder and Achurch, grates and door and window furniture; Pratt, Ltd., gas fixtures, plumbing, cloakroom fittings and gas-fitting; T. Glover, electric wiring, electric light fixtures and bells; Farrer, Ltd., sanitary fittings; Hayward Bros., Ltd., iron staircases; W. J. Bloye, decorative plaster; J. R. Pearson, Ltd., metalwork; Traley and Sons, marble; Craven Dunhill, Ltd., tiling.

Boots' Shop Premises, 16 New Bond Street, W.1 (page 142). General contractor, Bovis (1928), Ltd. Sub-contractors : Moreland, Hayne & Co., Ltd., structural steel; Siegwart Fireproof Floor Co., Ltd., patent flooring; F. F. Docking & Co., central heating; H. Arnault, Ltd., electric light fixtures, sunblinds and green bronze windows and doors; Matthews and Yates, Ltd., ventilation; Empire Stone Co., Ltd., stairtreads; Cashmore Art Workers, fibrous plaster; J. Whitehead and Sons, Ltd., marble front; Carter & Co., Ltd., ceramic mosaic; Geo. Parnall & Co., shop fittings; Claude General and Neon Lights, Ltd., signs.

Sports Pavilion, Eltham, Kent (pages 151–152). General contractors, John Harrison & Co. Sub-contractors : E. B. Bain & Co., heating; En-Tout Cas Co. (Syston), Ltd., hard tennis courts; Francis Polden & Co., Ltd., electrical work; Asbestos Cement Building Products Co., slates to roofs; F. Braby & Co., Ltd., zincwork; Pontifex and Sons, Ltd., sanitary fittings; A. B. Sports, turfing and land drainage; W. B. Simpson and Sons, Ltd., tiling; Merchant Trading Co., Ltd., Celotex boarding, used internally.

Mr. W. A. Kellett, L.R.I.B.A., has removed his office from Lloyds Bank Chambers, Barnard Castle, to 8 Lendal, York. Telephone No. : 3523.

TRADE NOTES

The rehearsal of the floodlighting of London for the International Illumination Congress and the Faraday celebrations, was held on Tuesday of last week. Experiments proved that given the increased intensity and the complete scheme as will be carried out in September, remarkable results will be achieved.

Those on the Big Ben tower and Westminster Abbey were carried out jointly by Messrs. Holophane and Messrs. Siemens. Westminster Abbey particularly showed the great potentialities of the flood-lighting of our ecclesiastical buildings.

Regarding the actual installation, twelve Holophane-Siemens "F.L. 1,000" 1,000 watt flood projectors were installed, by the courtesy of the Central Hall authorities, on the flat of the roof of the Central Hall. The western front of the Abbey is approximately 225 feet high by 95 feet wide, and the throw for the floods from the Central Hall 300 feet. The Holophane double parabolic floods give an approximate 200 times magnification of the bare lamp candle-power, and therefore one would estimate a maximum beam candle-power from each unit of 250,000, a total of three million candle-power for the twelve units.

A similar number of Holophane 1,000 watt floods were used for the trial on the western front of Big Ben.

The battery of twelve floods was erected in the courtyard, 150 feet from the face of the tower. For the section directly above the clock-face, there is a belfry set back, so that the ordinary projection of the floods would cut out the colonnade arches, and here a series of Siemens concentrating reflectors with 100-watt lamps was installed. Behind the face of the clock the white normally used 100-watt lamps were replaced by Siemens 150-watt amber sprayed lamps. This gave a red colour to the clock face, which when flooded from below gave a pink colour relief.

The tower is approximately 320 feet from the base to the top of the lantern, and 200 feet to the centre of the clock face, the width being approximately 50 feet. The mean throw of the beams was 170 feet.

The illustration on page 136 is reproduced by courtesy of Messrs. Holophane, Ltd.

*

Messrs. W. H. Gaze and Sons, Ltd., have recently secured the following contracts : New house, Eltham, for Messrs. Grace and Hughes; new dwellings at St. Marylebone, for the L.C.C.; alterations and decorations to London School of Economics, for Messrs. Trehearne and Norman, Preston and Co.; and Midland Bank, Tolworth, for Mr. J. D. Hossack, F.R.I.B.A.

*

The Elsan Manufacturing Co., of 34–5 High Holborn, London, W.C.1, were awarded a bronze medal for their exhibit of the Elsan chemical closet at the Royal Sanitary Institute Health Exhibition, held at Glasgow this month.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed at BLACKHEATH: Thirty-one houses, Kidbrook Park Road, for Messrs. Walker, Clinging & Co.; house, Kidbrook Park Road, for Messrs. A. Shore & Co.; corner blocks of houses, Kidbrook Park estate, for Messrs. Coleridge, Jennings and Soimenow; four houses, Beaconsfield Road, for Mr. J. Douglas Scott.

Mr. Allen W. Reid is to extend the school premises at the Trinity Congregational Church, Church Road, BRIXTON.

Plans passed by CAMBERWELL B.C.: Buildings, College Road, for Mr. F. A. Llewellyn; workshop, 9 Hever Road, for Messrs. Tarr and Leonard; additions, Camberwell Grove and Church Passage, for Messrs. H. P. Wyatt, Son and Partners.

Plans passed at CATFORD: Thirteen houses, Holmesley Road, for Messrs. W. T. Champion and Son; six houses, Danevy Road, for Mr. G. T. Harman; water tower and extensions, sports pavilion, Whitefoot Lane, for Messrs. Geo. Parker and Sons, Ltd.

The CROYDON Corporation is to erect twenty-six flats in Windmill Hill, Upper Norwood.

The CROYDON Corporation recommends the preparation of plans for a crematorium at Mitcham Road cemetery.

The CROYDON Corporation has prepared plans for the erection of a fire station in Lower Addiscombe Lane. The cost is estimated at £20,000.

The CROYDON Education Committee has appointed Mr. A. Sunderland as architect for the proposed elementary school on the Waddon housing estate.

Plans passed by CROYDON Corporation: Twenty-two houses, Hayling Park estate, for Mr. J. G. Cooper; factory, Mitcham Road, for Messrs. J. C. Brewer & Co.; four houses, Beauchamp Road, for Mr. E. W. Prichett; hall, offices, etc., Bedford Park, for Mr. E. H. Smith; twenty-four houses, Davidson Road, for Mr. J. W. Hall; alterations, 99 George Street, for Mr. E. Bates; seven houses, Croham Valley Road, for Mr. G. W. Peachey; four houses, Stonecroft Way, for Mr. H. Macintosh; rebuilding "Duke of Cambridge" public-house, Holmesdale Road, for Mr. C. R. Riches; twelve houses, Shirley Road, for Messrs. Paish, Tyler and Crump; drapery store, Frith Road, for Messrs. G. Baines and Sons; cinema, 793–5 London Road, for Mr. A. C. Matthews; nine houses, Orleans Road, for Mr. M. D. Wilde.

The governors of Addey and Stanhope school, DEPTFORD, are to improve and enlarge the school premises, at a cost of £12,000.

Plans passed by EAST HAM Corporation: Extensions, East Ham Labour Club, Katherine Road, for Mr. E. Meredith; house, Brancaster Road, for Mr. S. W. Bedford; eight houses, Shaftesbury Road, for Mr. W. H. Binns; four houses, Sheringham Avenue, for Mr. J. W. Lohden; twelve houses, Grantham Road, for Mr. W. Reeves; four houses, Nelson Street, for Mr. C. Griffiths; additions, lodge, Woodgrange cemetery, for Mr. T. L. Danial.

Plans passed at ELTHAM: Ten houses, Sidcup Road, for Messrs. Sykes and Pomfret; shop, Pound Place, for Mr. W. Childs; meeting hall, billiard room, etc., High Street, for Mr. Thomas Stott; four houses, Avery Hill Road, for Messrs. H. Smith & Co.; shop premises and meeting-room, Footscray Road, for Royal Arsenal Co-operative Society, Ltd.; bank and shops, High Street and Roper Street, for Messrs. Sykes and Pomfret; eight shops and flats, Sidcup Road, for Messrs. Eley and Allen.

Plans passed by GRAVESEND Corporation: Eight houses, The Fairway, for Messrs. W. E. and H. E. Thomas, Ltd.; seven houses, Hollybush Road, for Messrs. W. H. Black and Son.

The Essex Education Committee has purchased a site in Windsor Road, HORNCHURCH, for the erection of an elementary school.

The Essex Education Committee has approved plans for the erection of a junior school for 450 children in Suttons Lane, HORNCHURCH, at an estimated cost of £13,500.

The L.C.C. has passed plans submitted by Mr. B. George for the formation of a dome at Messrs. Derry and Toms, Ltd., High Street, KENSINGTON.

The L.C.C. is to improve the engineering services and provide a new boiler-house at the LAMBETH hospital, at a cost of £26,000.

Plans passed by LEWISHAM B.C.: 128 houses, Grove Park Central estate, for Mr. W. J. Brise; partially rebuilding "Prince of Wales" public-house, Perry Rise, for Messrs. Charrington & Co., Ltd.; thirteen houses, Holmesley Road, for Messrs. W. T. Champion and Son; two houses, Baring Road, for Mr. G. W. Crosby; buildings, corner of High Street and Myron Place, for Mr. S. W. Ackroyd; houses in Bexhill Road, Salehurst Road, and Stillness Road, Brockley, for Mr. G. T. C. Harman.

The Essex C.C. has purchased The Gables, MALDON, for conversion into a boys' home.

The L.C.C. is to remodel the Sidney Road school, SOUTH HACKNEY, at a cost of £9,180.

The L.C.C. has passed plans submitted by Messrs. Wallis, Gilbert and Partners, for the erection of buildings in Mabledon Place and Flaxman Terrace, ST. PANCRAS.

The L.C.C. Education Committee has approved plans for the erection of a central school on the Furzedown site, STREATHAM, at a cost of £21,000.

EASTERN COUNTIES

The COLCHESTER Corporation has decided to erect sixty-four houses on the Old Heath estate, and obtained sanction from the Ministry of Health for the scheme for the erection of 100 houses on the Harwich Road site.

Plans passed by COLCHESTER Corporation: Store, goods station, The Hythe; workshop, Sheepen Road; central warehouse, Wimpole Road, for Mr. E. E. Orrin, on behalf of the Co-operative Society, Ltd.; extensions, Hythe Bridge Ironworks, for Messrs. F. W. Brackett & Co., Ltd.; alterations and additions, Soldiers' Home, Queen Street, for Mr. J. G. P. Meaden.

The COLCHESTER Corporation has asked the borough engineer to report with regard to the provision of a municipal aerodrome.

The Board of Education has approved the plans of Messrs. Duncan Clark and Beckett for the erection of a central school for the COLCHESTER Education Committee in Barrington Road.

The Essex Education Committee is to enlarge the Council school at SOUTH BENFLEET, at a cost of £8,500.

The Essex Education Committee has acquired a site in Spinks Lane, WITHAM, for the erection of a central school.

SOUTHERN COUNTIES

The HASTINGS Corporation Water Committee is to obtain tenders for a new chlorinating plant for Brede pumping station.

The HASTINGS Corporation Water Committee recommends relaying the water main from Battle Road to Hollington schools, at an estimated cost of £380.

The HASTINGS Education Committee recommends carrying out alterations, painting works, and additions to various schools, at an estimated total cost of £2,440.

Plans passed at HASTINGS: Alterations, 132 Hollington Old Lane, St. Leonards, for Mr. H. Burleigh, architect; bungalow, Linton Terrace, for Messrs. Ward, Son and Wray, architects; office, North Terrace, for Mr. L. Towser, architect; conversion into flats, Tampenis, St. Helen's Park Road, for Messrs. Ward, Son and Wray, architects; two houses, Athelstan Road, for Mr. H. Burleigh, architect; alterations, Freemasons' Institution, Wellington Place, for Mr. P. H. Oxley, architect; dressing station, Bexhill Road, St. Leonards, for the St. John's Ambulance Brigade; conversion into flats, 14 Grosvenor Crescent, St. Leonards, for Messrs. Callow and Callow, architects; additions and alterations, Carisbrooke Road, for Messrs. Ward, Son and Wray, architects; house, Bexhill Road, St. Leonards, for Mr. H. H. Ford, architect; showroom, Hastings and St. Leonards Gas Co.'s office, Queen's Road, for Mr. C. F. Botley, architect; lecture-hall and covered way, Buchanan Hospital, Springfield Road, St. Leonards, for Messrs. Ward, Son and Wray, architects; alterations, 52 and 53 Havelock Road, for Messrs. Callow and Callow, architects.

MIDLAND COUNTIES

The KIDDERMINSTER Corporation is to construct a steel roof at the borough retail markets.

NORTH-WESTERN COUNTIES

The LIVERPOOL Corporation is to remodel and enlarge the Rawden Library, Anfield.

The WREXHAM Corporation is to erect 178 houses on the Acton Park estate to the plans of Messrs. Lockwood, Abercrombie and Saxon, architects, of Chester.

NORTHERN COUNTIES

The BRADFORD Education Committee is to inspect sites in the Wapping district for the erection of a nursery school.

Plans passed at SOUTH SHIELDS: Assembly hall and gymnasium, Barnes Road, for Mr. T. Taggart; two houses, Sunderland Road, for Messrs. J. H. Morton and Sons; two flats, Sunderland Road, for Mr. T. B. Carr; seven houses, Sea View Terrace, for Mr. F. Wills; twenty-four houses, Lisle Road, Harton, for Mr. J. H. Woolgar; alterations, "Victoria" Hotel, Harton, for the Newcastle Breweries, Ltd.; alterations, 25, 27, 29 and 31 Denmark Street, for Messrs. W. C. Rippon & Co.; alterations, premises, corner of Berwick Street and Bertram Street, for Mr. F. W. Newby.

Messrs. W. J. Robertson and Sons, Ltd., are to erect sixteen semi-detached villas in Tynedale, Readhead and Lavington Roads, SOUTH SHIELDS.

The managers of the St. Denys' School, YORK, are preparing plans for the provision of handicraft and housecraft rooms at the school.

The YORK Corporation is to erect baths at Marygate, at a cost of £15,000.

Plans passed at YORK: House and business premises, Campleshon Road, for Mr. W. H. Lacy; additions, "Light Horseman" Hotel, Fulford Road, for the Tadcaster Tower Brewery Co., Ltd.; additions, 20 Blake Street, for the Britannic Assurance Co., Ltd.; house, Green Dykes Lane, for Mr. F. Bell; additions, "Kingston" Hotel, Tanner Row, for John Smith's Tadcaster Brewery Co., Ltd.; additions, Argyle Street, for South Bank Working Men's Club; additions, 1 Low Ousegate, for Jay's Furnishing Stores; covered stand, Clarence Street, for York Rugby League Football Club; four cottages, Terry Street, for Mr. C. Walker; additions, 141 Walmgate, for Messrs. Oman, Ltd.; additions, Coney Street, for Messrs. Leak and Thorp, Ltd.; additions, 71 East Parade, for Mr. Robinson; six houses, Huntington Road, for Messrs. Culliford and Tindall; additions "Spotted Cow" Hotel, Barbican Road, for Tadcaster Tower Brewery Co. Ltd.; layout of estate, Middlethorpe Lodge, for Mr. T. Place; two bungalows, Bishopsthorpe, for Mr. C. K. Kirk; two houses, Rawcliffe Lane, for Messrs. Simpson Bros.; two bungalows, Monk Stray, for Mr. A. Hearld.

SCOTLAND

The GLASGOW Corporation is to ascertain what firms are prepared to quote for rebuilding works at Lennox Castle.

The GLASGOW Education Committee is structurally to improve further schools at an estimated cost of £48,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington ..	N.W. Counties	1 6½	1 2
A3	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B3	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A3	Atherstone	Mid. Counties	1 5	1 0½
B1	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A3	Barnard Castle	N.E. Coast	1 5	1 0½*
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A3	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A3	Bedford ..	E. Counties	1 5	1 0½
A3	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A3	Bewdley ..	Mid. Counties	1 5½	1 1½
B3	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B3	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A3	Boston ..	Mid. Counties	1 5	1 0½
A3	Bournemouth	S. Counties	1 5	1 0½
B3	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A3	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B3	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A3	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B3	Brixham ..	S.W. Counties	1 3	11½
A3	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B3	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A3	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B3	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B3	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A3	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A3	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A3	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A3	Crewe ..	N.W. Counties	1 5½	1 1½
A3	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B3	Deal ..	S. Counties	1 3½	11½
A3	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B3	Dorchester	S.W. Counties	1 3½	11½
A3	Driffield ..	Yorkshire	1 5	1 0½
A3	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A3	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A3	Exeter ..	S.W. Counties	*1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A3	FELIXSTOWE	E. Counties	1 5	1 0½
A3	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B3	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B3	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A3	Gloucester ..	S.W. Counties	1 5½	1 1½
A3	Goole ..	Yorkshire	1 5½	1 1½
A3	Gosport ..	S. Counties	1 5	1 0½
A3	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B3	Hastings ..	S. Counties	1 3½	11½
A3	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A3	Ipswich ..	E. Counties	1 5	1 0½
B3	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A3	Kettering ..	Mid. Counties	1 5½	1 1½
A3	Kidderminster	Mid. Counties	1 5½	1 1½
B3	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A3	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B3	Lewes ..	S. Counties	1 3	11½
A3	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A3	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A3	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A3	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A3	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A3	Middlewich	N.W. Counties	1 5½	1 1½
B3	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A3	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A3	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A3	OAKHAM ..	Mid. Counties	1 5	1 0½
A3	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A3	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B3	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A3	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A3	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A3	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A3	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A3	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A3	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A3	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B3	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A3	Shrewsbury	Mid. Counties	1 5½	1 1½
A3	Skipton ..	Yorkshire	1 5½	1 1½
A3	Slough ..	S. Counties	1 5	1 0½
A3	Solihull ..	Mid. Counties	1 5½	1 1½
A3	South'pton	S. Counties	1 5	1 0½
A3	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A3	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A1	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A3	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A3	Warwick ..	Mid. Counties	1 5½	1 1½
A3	Wellingborough	Mid. Counties	1 5½	1 1½
A1	West Bromwich	Mid. Counties	1 6½	1 2
A1	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A3	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A3	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A3	Worcester	Mid. Counties	1 5½	1 1½
A3	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A3	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B3	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . ,,		1	8
Joiner . . . . ,,		1	8
Machinist . . . . ,,		1	9
Mason (Banker) . . . ,,		1	8
,, (Fixer) . . . ,,		1	9
Plumber . . . . ,,		1	8
Painter . . . . ,,		1	7
Paperhanger . . . ,,		1	8
Glazier . . . . ,,		1	8
Slater . . . . ,,		1	8
Scaffolder . . . . ,,		1	4
Timberman . . . . ,,		1	4
Navvy . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . ,,		1	5½
Crane Driver . . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton		2	8
Blue Lias Lime . . . . ,,		2	10
Hydrated Lime . . . . ,,		2	16
Portland Cement . . . ,,		2	6
Rapid Hardening Cement . . ,,		2	13
Thames Ballast . . . per Y.C.			8
½" Crushed Ballast . . . ,,		10	0
Building Sand . . . . ,,		10	6
Washed Sand . . . . ,,		11	6
2" Broken Brick . . . ,,			9
½" ,, ,, . . . ,,		12	6
Pan Breeze . . . . ,,			6
Coke Breeze . . . . ,,			8

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . . per F.R.	1	1	1	6
Bends . . . . each	2	10	4	4
Taper bends . . . . ,,	6	3	7	2
Rest bends . . . . ,,	5	9	8	9
Single junctions . . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . . ,,	2	6	3	2
½" Channel bends . . . ,,	7	8	—	
Channel junctions . . . ,,	7	0	12	6
Channel tapers. . . . ,,	5	6	7	9
Yard gullies . . . . ,,	9	6	11	6
Interceptors . . . . ,,	18	6	25	9
Iron drain pipe . . . per F.R.	2	3	3	5
Bends . . . . each	6	0	13	0
Inspection bends . . . ,,	15	3	24	0
Single junctions . . . ,,	9	3	18	0
Double junctions . . . ,,	14	0	27	6
Lead wool . . . . lb.		6	—	
Gaskin . . . . ,,		5	—	

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . . ,,	8	16	0
,, Brindles . . . ,,	8	0	0
,, Bullnose . . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . . ,,	8	16	0
Midhurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . . ,,	30	0	0
Double Headers . . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R. at Nine Elms:	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . ,,	2	11
York stone . . . . ,,	6	9
,, Sawn templates . . . ,,	7	6
,, Paving, 2" . . . F.S.	1	8
,, ,, 3" . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20"× 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, 2nds . . . ,, ,,			4
Mahogany, Honduras . . ,, ,,		1	3
,, African . . . ,, ,,		1	1
,, Cuban . . . ,, ,,		2	6
Oak, plain American . . ,, ,,		1	0
,, Figured ,, . . ,, ,,		1	3
,, Plain Japanese . . ,, ,,		1	2
,, Figured ,, . . ,, ,,		1	5
,, Austrian wainscot . ,, ,,		1	6
,, English ,, . . ,, ,,		1	11
Pine, Yellow . . . ,, ,,		1	0
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . . ,, ,,		1	3
,, Burma . . . ,, ,,		1	2
Walnut, American . . ,, ,,		2	3
,, French . . . ,, ,,		2	3
Whitewood, American . . ,, ,,		1	1
Deal floorings, ⅜" . . . Sq.	1	1	0
,, ½" . . . ,,	1	3	6
,, 1" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 1¼" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, 1" . . . ,,		17	6
,, 1" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1¼" . . . ,,	1	8	0

Plywood, per ft. sup. Thickness	⅜"			½"			¾"			1"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts: TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . .	55	,, steam .	40
FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of	3" s.	d.	4" s.	d.
ordinary thickness metal .	F.R.	7		10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5		6
Stop ends . . . . each		6		7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	

PLUMBER

	£	s.	d.
Lead, milled sheet . . . cwt.		19	0
,, drawn pipes . . . ,,		19	6
,, soil pipe . . . ,,		22	6
,, scrap . . . ,,		9	0
Solder, plumbers' . . . lb.		1	11
,, fine do. . . . ,,		1	3
Copper, sheet . . . ,,		1	0
,, tubes . . . ,,		1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle	2		4
,, rent . . . ,, lb.	3		9½
Lath nails			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,, over 15 . ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add	3	0
If in underpinning	"	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shattering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1¼" " " " "	"	2	7	6
4" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1¼" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1½" do.	"	3	4	0
1¼" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " " "	"	2	6
1¼" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " " "	"	4	6
Extra only for moulded horns	Each		9
1¼" deal four-panel square, both sides, door	F.S.	2	6
2" " " " "	"	3	0
1¼" " but moulded both sides	"	3	0
2" " " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " " "	"	2	0
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1¼" deal moulded wall strings	"	2	6
1¼" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1¼" × 1¼" " " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	15	6
Do. in flashings	"	1	18	0
Do. in covering to turrets, etc.	"	2	5	0
Do. in soakers	"	1	11	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

Lead service pipe and fixing with pipe hooks	½" s.	d.	¾" s.	d.	1" s.	d.	1¼" s.	d.	2" s.	d.	4" s.	d.
	F.R. 1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks	—		—		—		—		—		5	9
Extra, only to bends	Each —		—		—		—		2	3	6	6
Do. to stop ends	" 7		9		1	0	1	3	2	0	—	
Boiler screws and unions	" 3	6	4	0	5	6	8	0	—		—	
Lead traps	" —		—		—		7	6	10	6	—	
Screw down bib valves	" 7	6	10	6	12	6	—		—		—	
Do. stop cocks	" 10	0	12	0	16	0	23	6	56	6	—	
4" cast-iron ½-rd. gutter and fixing									F.R.		1	3
Extra, only stop ends									Each		1	0
Do. angles									"		1	6
Do. outlets									"		3	0
4" dia. cast-iron rain-water pipe and fixing with ears cast on									F.R.		1	6
Extra, only for shoes									Each		2	6
Do. for plain heads									"		3	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

A TRAMWAY SHELTER-KIOSK

ERECTED IN PINK AND GREY CONCRETE AT BRÜNN, CZECHOSLOVAKIA

SEAT, KIOSK, AND FLOWER-DECKED ROOF ABOVE

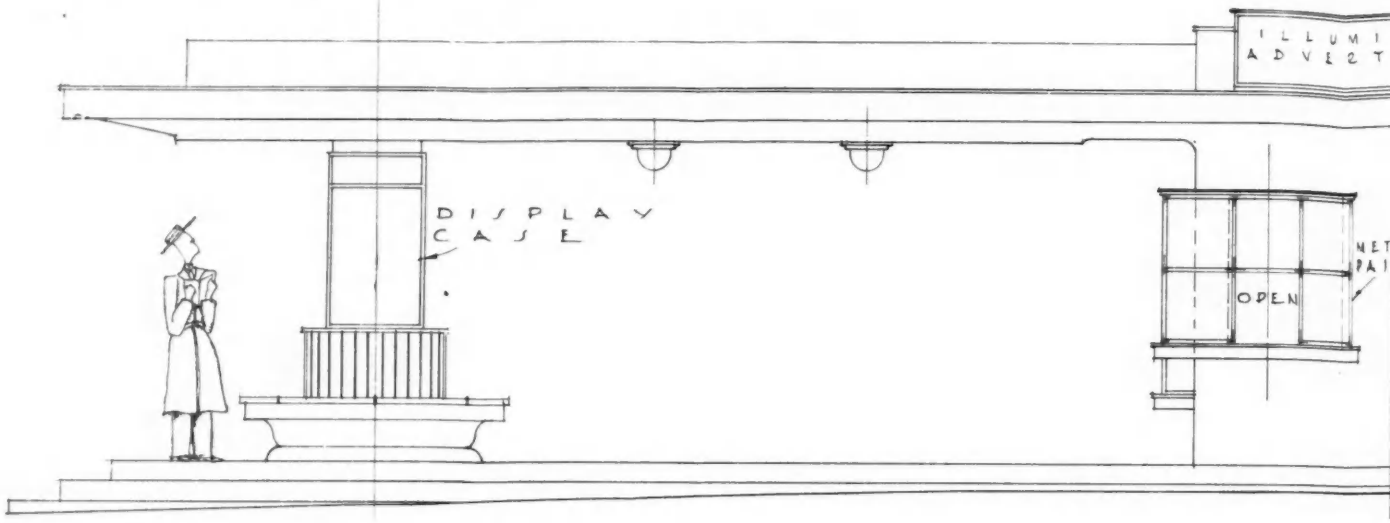
THE subject of the above photograph and the detail drawings overleaf is a combined kiosk and shelter erected by the Tramways Department of Brünn on a wide V-shaped strip of pavement at the junction of two main routes.

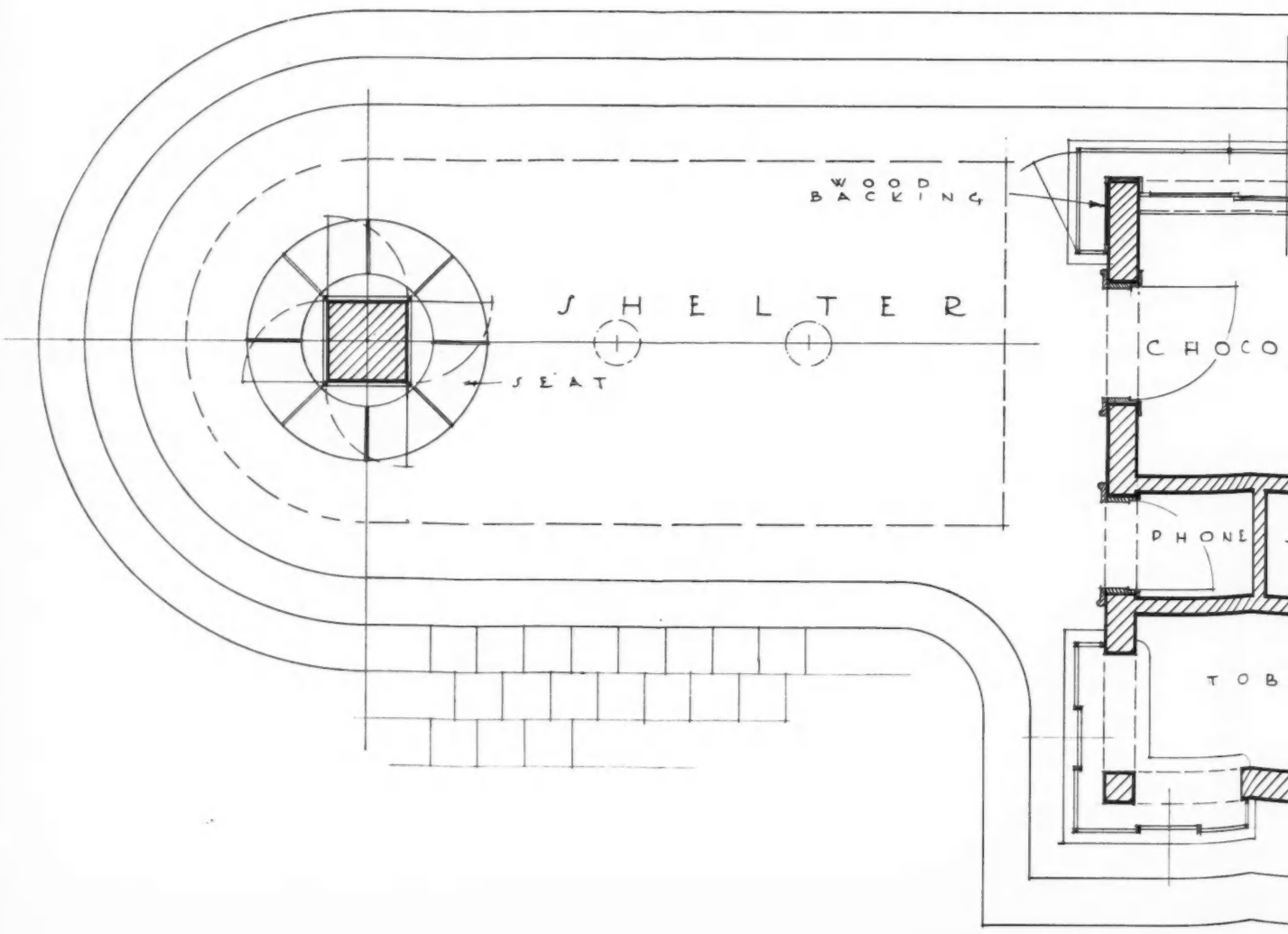
The roof is supported at one end by the kiosk and at the other by a square concrete pillar, around which is a wood seat on a concrete base, and, at a higher level, a showcase for the display of time tables and general information. The kiosk is divided into four parts, the two larger for the sale of chocolates and tobacco, while the smaller ones serve as telephone box and Tramways Department store. The roof slopes away from the edge, and rain-water gets away down the centre of the column and within the walls of the kiosk.

A gay appearance is obtained by the planting of bright flowers in a channel formed on the roof to hold earth. Moreover, the concrete, with the exception of the steps, which are grey, has a pinkish colour; all the woodwork and metal is painted white.

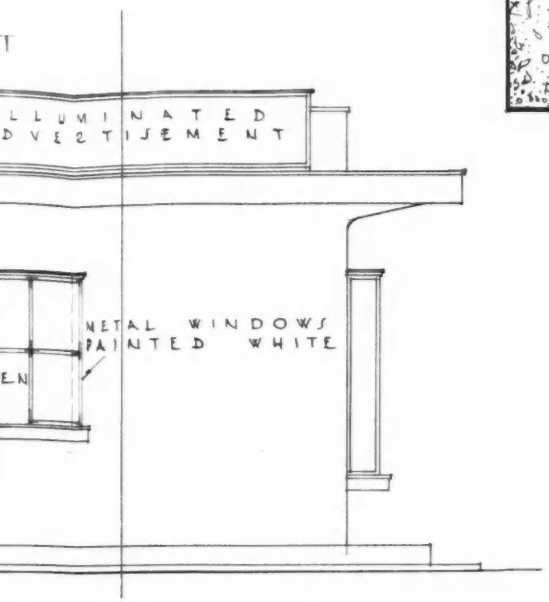
KIOSK & TRAMW
SHELTER
BRUNN

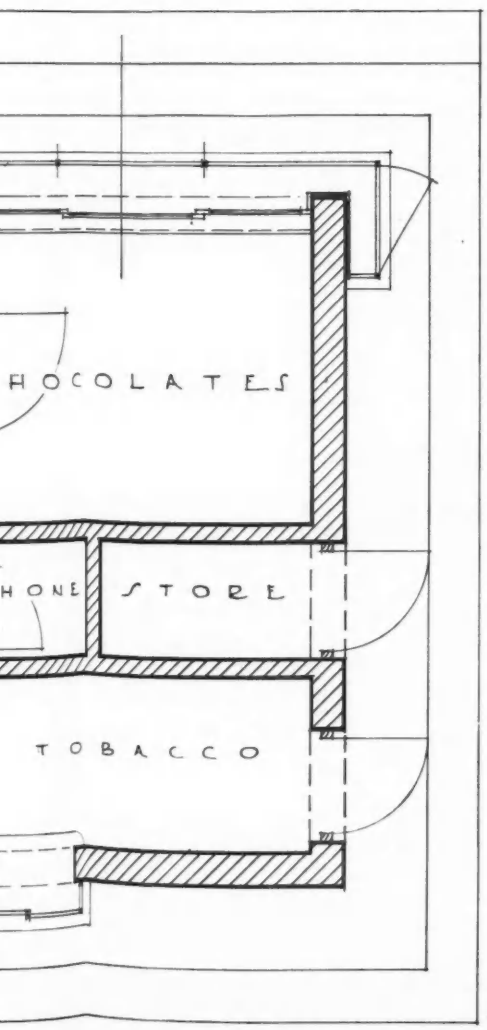
SCALE ¼" TO 1 FOOT

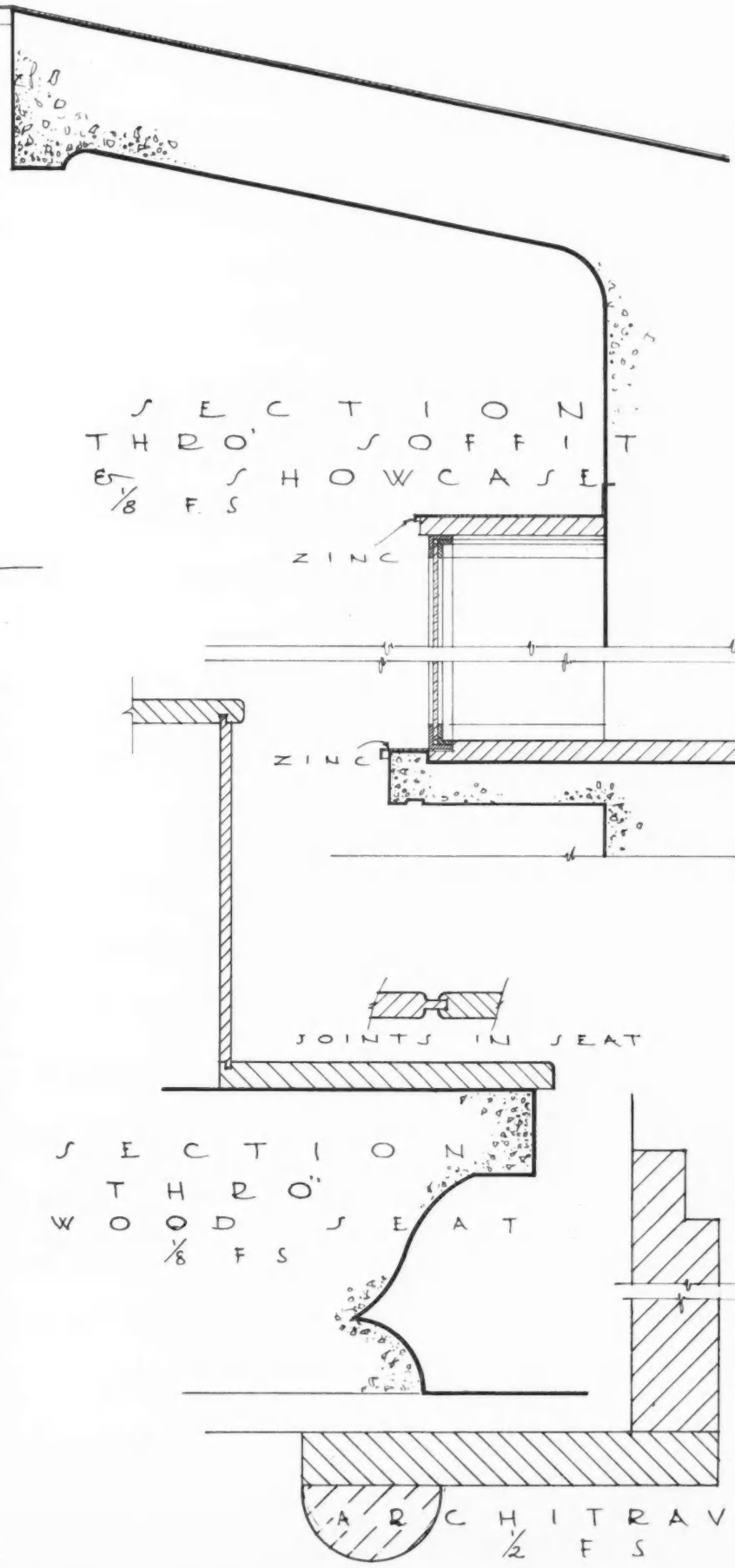




M W A Y

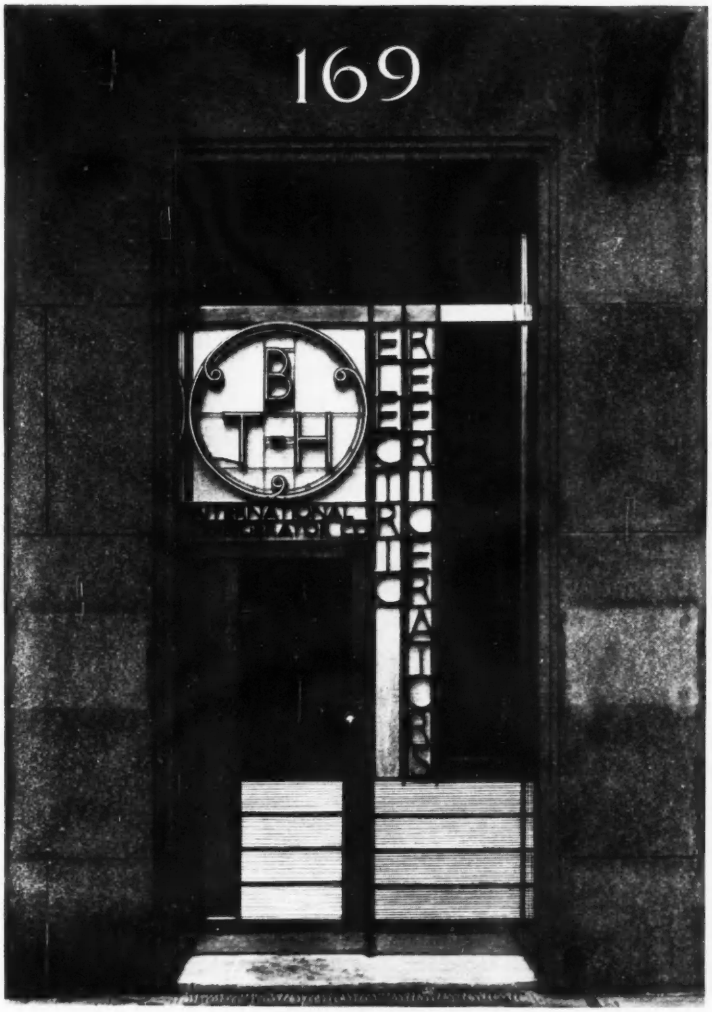

LLUMINATED
DVERTISEMENT
METAL WINDOWS
PAINTED WHITE


HOCOLATES
HONE
STORE
TOBACCO


ZINC
SECTION
THRO' SOFFIT
& SHOWCASE
1/8 F S
ZINC
ZINC
JOINTS IN SEAT
SECTION
THRO'
WOOD SEAT
1/8 F S
ARCHITRAVE
1/2 F S

IN BLUE AND GREEN LIGHT

AN ELECTRIC SHOPFRONT IN REGENT STREET, W.



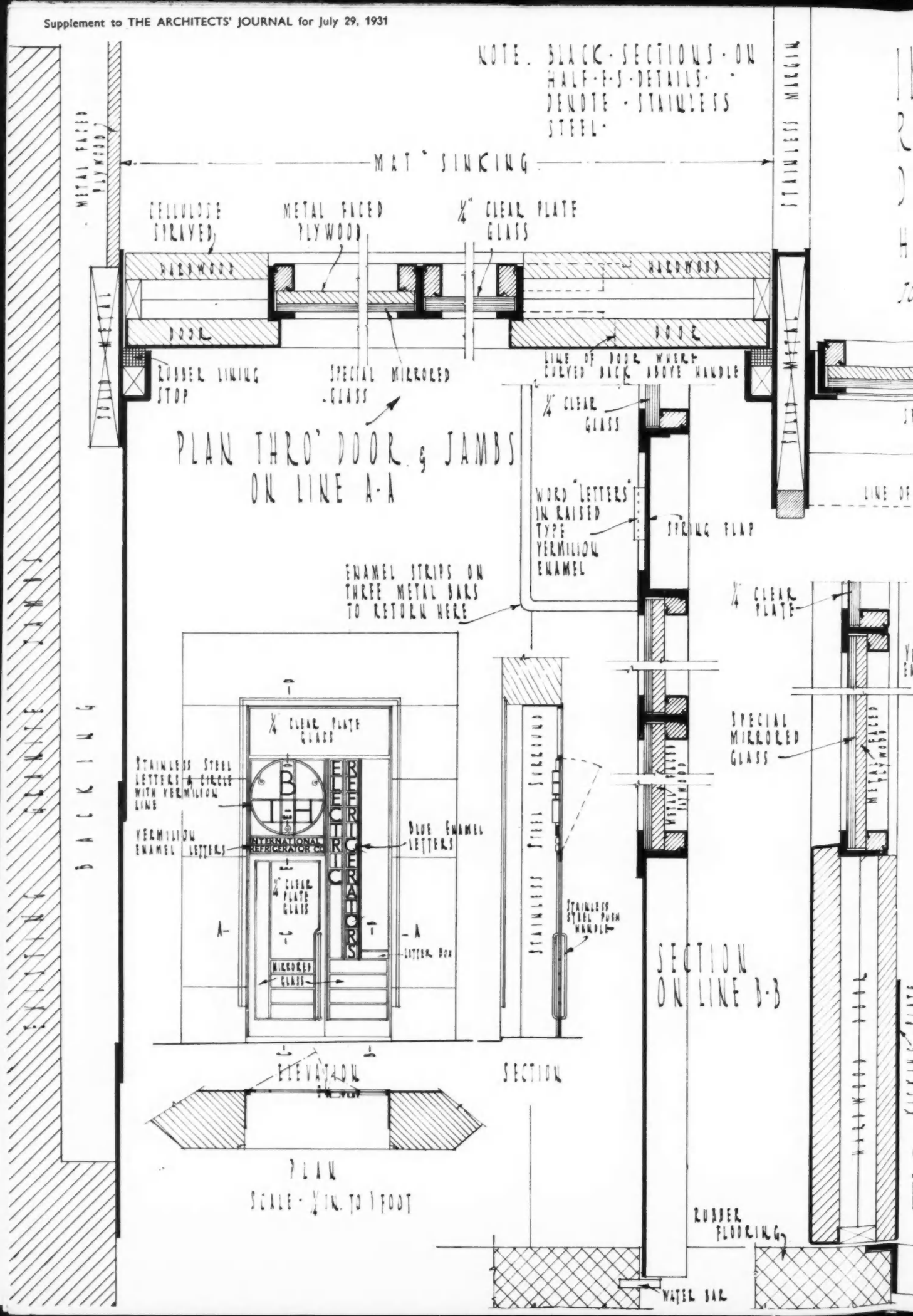
[*Joseph Emberton, Architect*

A DESIGN IN HIGH-TENSION LIGHT-TUBES

THE corner doorway shown above, and by detail drawings on the inner pages of this supplement, is the chief feature of the shop front illustrated as a whole on the last page.

The arrival on the scene of the electric high-tension glass light-tubes, filled with mercury vapour, neon and other gases, which, in the absence of anything that could be dignified by the name of design, too often affront the eye in glaring outlines, has here been turned to architectural advantage. They are made to take an integral part in the composition, the metal letters having been specially designed to accommodate the electrodes and wiring for them. The backing to the letters is executed in mirrored glass, with bright, acid-stippled finish. In some other portions, ribbed glass figures as a decorative element.

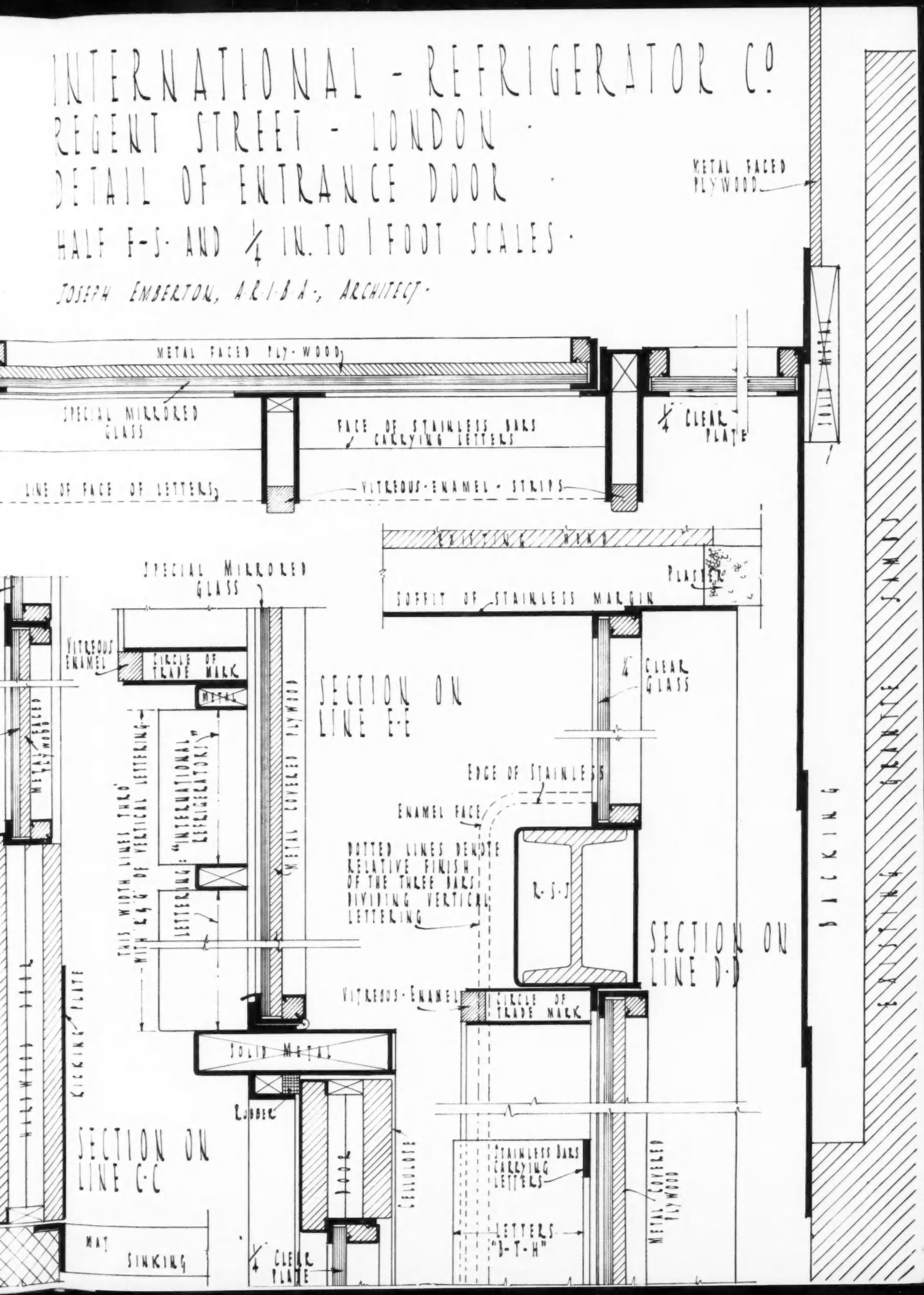
The doorway has a surround of granite, and the window frames and other metal parts of the shop front are carried out in stainless steel.


NOTE. BLACK SECTIONS ON HALF-E-S DETAILS DENOTE STAINLESS STEEL.
MAT SINKING
METAL FACED PLYWOOD
CELLULOSE STRAYED
METAL FACED PLYWOOD
¼" CLEAR PLATE GLASS
HARDWOOD
DOOR
RUBBER LINING STOP
SPECIAL MIRRORED GLASS
PLAN THRO' DOOR & JAMBS ON LINE A-A
LINE OF DOOR WHERE CURVED BACK ABOVE HANDLE
¼" CLEAR GLASS
WORD "LETTERS" IN RAISED TYPE VERMILION ENAMEL
SPRING FLAP
ENAMEL STRIPS ON THREE METAL BARS TO RETURN HERE
STAINLESS STEEL LETTERS & CIRCLE WITH VERMILION LINE
VERMILION ENAMEL LETTERS
BLUE ENAMEL LETTERS
INTERNATIONAL REFRIGERATOR CO
ELECTRIC REFRIGERATORS
¼" CLEAR PLATE GLASS
MIRRORED GLASS
LETTER BOX
STAINLESS STEEL SURROUND
STAINLESS STEEL PUSH HANDLE
ELEVATION
SECTION
PLAN
SCALE - ½ IN. TO 1 FOOT
SECTION ON LINE B-B
¼" CLEAR PLATE
SPECIAL MIRRORED GLASS
METAL FACED PLYWOOD
RUBBER FLOORING
WATER BAR
BACKING

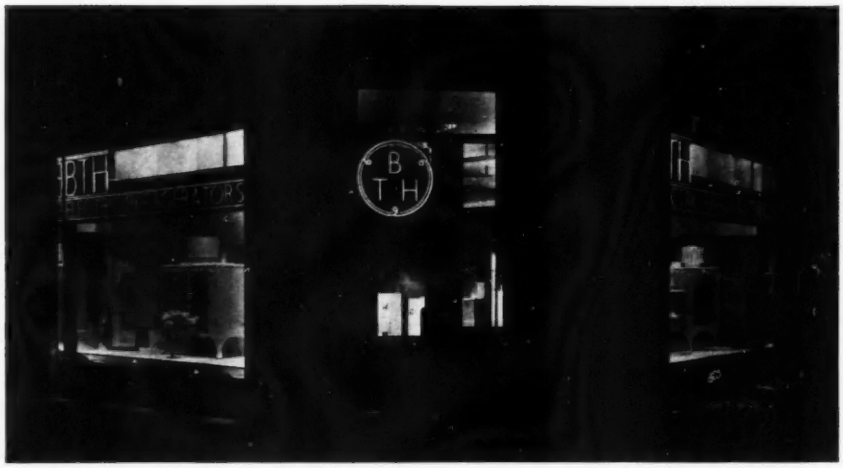
INTERNATIONAL - REFRIGERATOR Co.
REGENT STREET - LONDON.
DETAIL OF ENTRANCE DOOR.

HALF F-S. AND ¼ IN. TO 1 FOOT SCALES.

JOSEPH EMBERTON, A.R.I.B.A., ARCHITECT.



THE SHOPFRONT, BY DAY



[*Joseph Emberton, Architect*

THE SHOPFRONT, BY NIGHT

SELECTED PRECEDENTS:

FLAT ENTRANCES IN GERMANY AND FRANCE

INCREASING standardization of plan in flat buildings has resulted in enrichment being restricted to a few prominent details.

In Germany, where the communal spirit is, if anything, stronger than the family, flat doorways are often enlivened with sculpture, or whimsicalities in stucco and terra-cotta; the doors themselves being usually picked out in gay patterns based on the almost universal glass squint. In France, a country of formality, where the family is a defensive unit against the community, wrought iron, which symbolizes exclusion, is the decorative medium preferred.

The "Plain Jane and No Nonsense" functionalism of figure **1** *— in which the heavy concrete raft separating ground- and first-floor flats is protracted beyond the re-entrant angle of the main elevation to form a rather ponderous canopy—disdains any concession to ornamental graces. Yet the parallel strips of steel-plating and opaque glass make the door itself something of a decorative feature. Figure* **2** *shows stucco modelling round the jambs and lintel characteristic of the larger German housing estates, known as "Siedlungen." Here again the door strikes a fresh note, although the design is a very simple one. Figure* **3**, *a more elaborate composition, combines a somewhat heavy surround of patterned brickwork and the conventionalized floral motifs of the wrought-iron grilles on the side windows with a sculptured figure crowning the keystone bracket over the fanlight. Figures* **4** *and* **5** *are examples taken from Parisian "luxury" flats, where tenants are presumed to be motor-owners. In the former, the doorway for pedestrians is still the central feature, the garage entrance being on the right. In the latter (which has an exit as well as an entrance for cars), pedestrians are relegated to the narrow doors.* P. M. S.

[*Erwin Gutkind, Architect.*

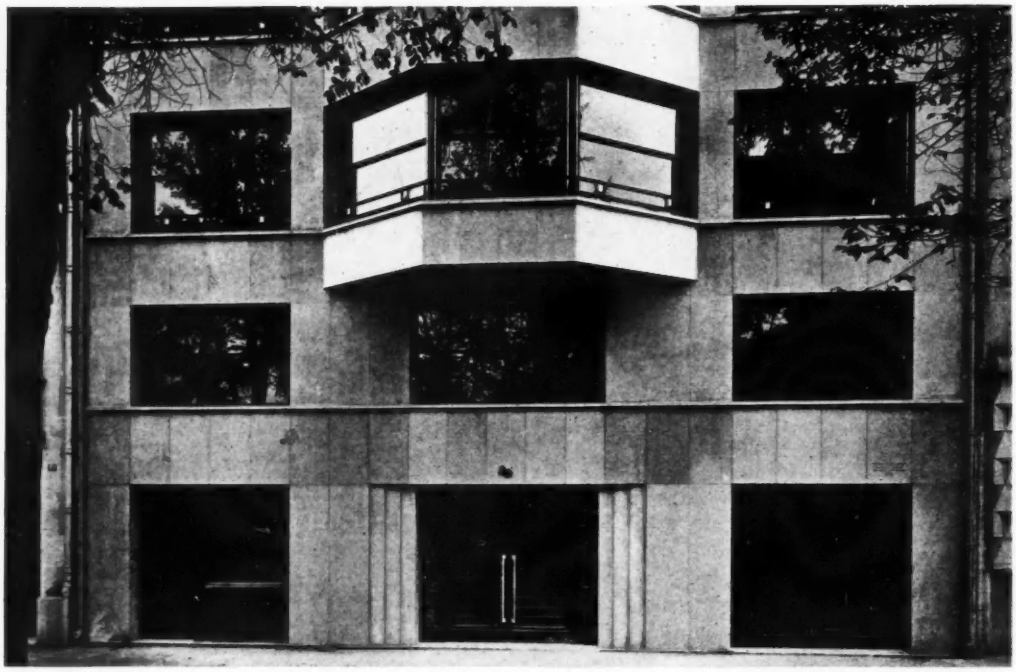
1. *THE LICHTENBERG SIEDLUNG, BERLIN.*

[*O. O. Kurz, Architect.*

2. *IN THE KARL-THEODOR-STRASSE, MUNICH.*

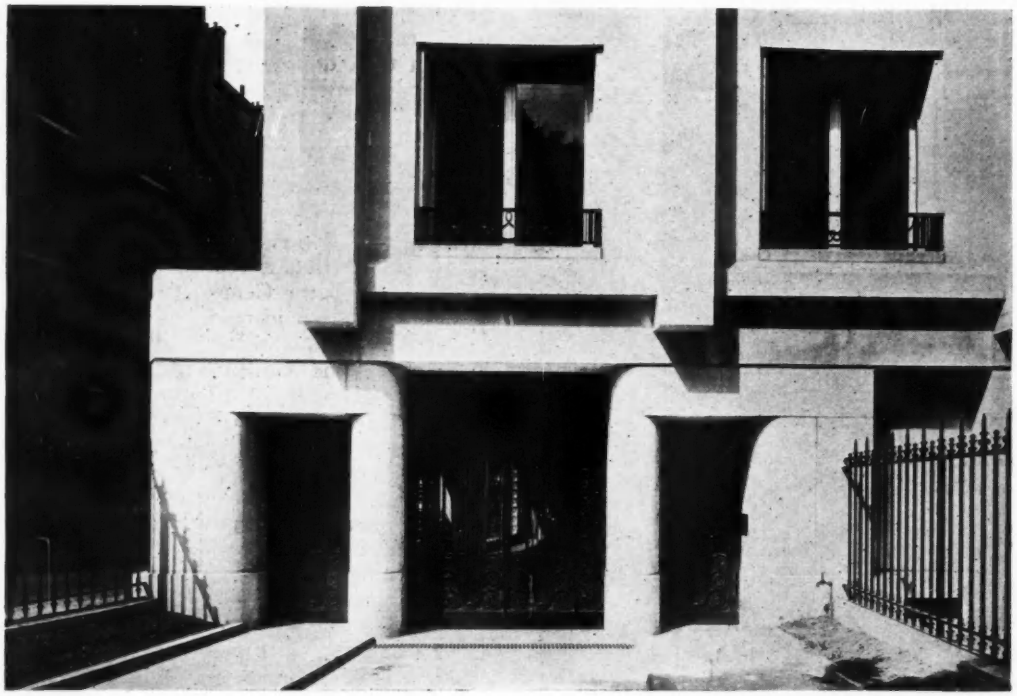
[*O. O. Kurz, Architect.*

3. *IN THE MAINZER-STRASSE, MUNICH.*



[*Wrought-iron gates by H. Szetlak.*

4. ON THE QUAI D'ORSAY, PARIS. M. ROUX-SPITZ, ARCHITECT.



[*Wrought-iron gates by H. Schenck.*

5. AT THE CORNER OF THE RUE MONTROSIER AND THE BOULEVARD MAILLOT, PARIS.

THE ARCHITECTS' JOURNAL

WEDNESDAY, AUGUST 5, 1931

ANOTHER CART BEFORE THE PLANNING HORSE

LAST week the Government's latest Housing Act received the Royal Assent. The Housing (Rural Authorities) Act provides £2,000,000 as a special subsidy for rural housing, in addition to about £8,000,000 to be paid for the same buildings under the Wheatley Act of 1924. It is anticipated that this substantial amount contributed by taxpayers will lead to 40,000 houses being built within the next twelve months in agricultural parishes. But what control will there be? Will a few farmers serving on a Rural District Council tell the local surveyor to produce ugly cottages at the minimum cost?

The Town and Country Planning Bill has been shelved until the autumn, although it provided much-needed powers to control the layout, the design and the materials of all new buildings, including the proposed 40,000 cottages. By all the laws of common sense the Planning Bill should have been passed first, and the Rural Housing Act afterwards. But, exactly as happened last year in the case of the Greenwood Housing Act, so again in 1931 the cart has been placed before the horse. Without a plan, these ten millions will go far to continue the desecration of rural Britain.

The latest Rural Act was not seriously resisted by the Opposition. Only a few economists, such as Mr. Geoffrey Drage, criticize it on the grounds that a total extra capital subsidy of £10,000,000 is a serious burden in these days; that it will probably check the fall in building costs; that it strikes a blow at private enterprise; and that it is, in fact, "a wasteful piece of window-dressing." A safer guide than Mr. Drage on the essentials of the problem is the Report published a few days ago by the Committee on the Rent Restrictions Act. This pointed out that, although new dwellings sufficient to accommodate 6,000,000 persons have been built since the war, and the population has only increased by 2,000,000 since 1919, yet only about one-third of the new accommodation consists of houses to LET. The heart of the problem today is the provision of three-bedroomed houses to be let at a rent of about 10s. in urban districts, and at 4s. 6d. a week, or less if possible, in country districts.

The new Act aims at providing houses in agricultural parishes at low rents. By a new development, on lines proposed by Sir Tudor Walters, the administration of the Act is to be placed in the hands of a Committee, which will press councils to hurry up, will determine the number and kind of houses for which this extra subsidy will be given, the date by which they are to be built, and the rents at which they are to be let. Sir Tudor has agreed to be the Chairman, and among the other members will be Sir J. Walker Smith, representing the Building Trade Employers, and Mr. Richard Coppock, representing the Operatives. Those qualified to express an opinion expect that at least 300 rural councils will jump at the bait of a double subsidy now offered, and that the new legislation will produce a lusty family of new houses. If only more adequate planning powers were now available, the risks of waste and vandalism would be less.

Readers, however, may well wonder whether these new houses will not simply add 40,000 more disfigurements to the countryside. In the Commons, Captain Cazalet asked that a representative of the C.P.R.E. should serve on the Central Committee, so that some regard might be paid to the architectural character of the new houses, but the proposal was abruptly declined by the Government. Accordingly, unless action is taken by voluntary means, we may see many of our beauty spots irretrievably spoilt by the erection of cottages, designed by inept and untrained surveyors, and constructed of Belgian bricks and French tiles, utterly out of harmony with the traditional designs and materials of the district. Politicians find it hard to realize that the haphazard ways of the past must now be set aside, and that considered planning is essential if we are not recklessly to throw away the heritage of the centuries.

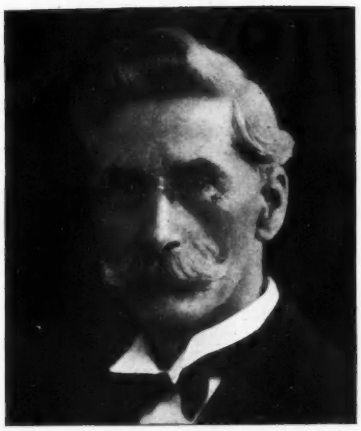
Where local authorities have shown the necessary foresight to set up advisory architectural panels, there is, at any rate, some brake upon the untutored activity of rural surveyors, into whose hands so much of the responsibility for carrying out the new Housing Act will be committed. But panels are few and the dangers of haste are many. It will be uphill work reconciling, during the coming few months, the needs of housing development and of rural preservation.

[*Shreve, Lamb and Harmon, architects.*

THE MAIN ENTRANCE TO THE EMPIRE STATE BUILDING, NEW YORK

This photograph represents the main entrance from Fifth Avenue, New York, to the world's tallest building. The base is of black granite, the remainder of the front of grey limestone. Aluminium is largely used for the metal work; the bands above the windows are, however, of bronze, like some of the divisions of the large lobby window, of which the glass is frosted, to avoid reflections, so that it appears as a dull note in an otherwise glistening composition. A series of articles on the Empire State Building is in progress in *The Architectural Forum*, of New York, from which this picture is taken.

NEWS & TOPICS



Sir Robert Tasker, Chairman of the L.C.C. New Building Act Committee, who has recently returned from America, where he studied the possibilities of skyscrapers for London.

Mr. C. F. A. Voysey, the pioneer of modern architecture, whose work will be exhibited at the Batsford Galleries, commencing on October 2 next. He recently received a Civil pension.

NO CHARING CROSS BRIDGE

DESPITE the delays and the disheartening wastage of money which Charing Cross Bridge has involved, the Government's decision not to finance scheme No. 6 is based undoubtedly on the new conception of the matter which is the outcome of determined opposition. Had the state of the Road Fund been the only reason for non-participation, nothing else would have been said, but in Mr. Morrison's letter to the L.C.C. he clearly states that the prospect of electrification in the near future puts a new complexion on the matter, and that, in short, scheme No. 6 is not a scheme which has a reasonable chance of serving London well.

★

It is rather galling to recall how the low-level scheme, which THE ARCHITECTS' JOURNAL has so consistently advocated, was damned by the Advisory Committee for daring to imagine that electrification might one day be general, even while we may have reason now to congratulate ourselves that the authors of that scheme had principles which they thought too good to leave undefended against the committee's censures. It is an ill wind that blows no one any good. It seems to me now that it should be forgotten that Waterloo Bridge was ever bound up with Charing Cross. The L.C.C. should put in hand the work of widening—not demolition, as Sir Percy Simmons threatens—and London should at once set about the work of making a *real* plan for its centre, a plan based, as that of New York's is, on investigation and research. Into such a plan Charing Cross will be fitted without the possibility of controversy, since controversy can be silenced by well-founded planning.

SKYSCRAPING

Sir Robert Tasker has just returned from America as little disposed as ever to the idea of skyscrapers in London. They took him up to the top of the Empire State Building, and five floors below ground in the Palmer House Hotel in Chicago, and told him the old story of how long skyscrapers last in New York, and so on, but he still thinks that New York is one place and London another. His faith in low buildings as opposed to sudden accretions of densely-packed skyscrapers is founded on, or has, at any rate, a very firm justification in, ascertained fact, and there are few sections of New York business communities that will not admit to having found serious deficiencies in the skyscraper system.

★

The truth of the matter is, of course, that skyscrapers were never prohibited, were, indeed, not looked for. They became possible in time, and as they became possible (and values rose to accommodate the possibility), started a vicious circle which threatens to meet in a strangle-hold of congestion, lack of light and air, and overhead expenses, which the first real downward movement of property values will accelerate most dangerously. One skyscraper gets all the light and air—and the profit from them. Fifty skyscrapers together fight for what light and air is left, and may one day be left fighting for life if no better system supervenes.

★

We have still to discover, I think, whether the varying street widths and the irregular plan of London can even stand the 100 ft. maximum at present enforced. It may well be that investigation will be inclined to a much more rigorous zoning, pending the replanning of central areas, perhaps even helping to direct attention to the areas where planning is most necessary.

AERODROMES OVER RAILWAY STATIONS

The economics of civil aviation will always be bound up with the time factor, measured more narrowly than it has been in the past for any other form of transport. With our cities spread out over vast areas of completely built-up land, it is not fantastic to assume that large railway stations could provide the aerodrome sites otherwise denied, and a scheme by Mr. J. Hembrow, F.R.I.B.A., for converting Victoria and Exchange Stations, Manchester, into a landing and taking-off ground for auto-giro planes must be considered as a reasonable suggestion, for which some demand already exists. The only point I would feel inclined to make is that this suggestion should be regarded as evidence in a really thorough examination of air-transport planning in relation to regional, national and international requirements, and not just as a new way of keeping Manchester in the sun.

THE DEVELOPMENT SCHEMES COMMITTEE

The Committee set up by the Government to see what development schemes might be suggested by an examination of Regional Planning reports has found very little to report. The suggestion, I believe, emanated from the Liberal Party, which has a name for being fairly sound in these matters, though it must have been obvious to town-planners that Regional Reports, except in so far as roads are concerned, do not set out to plan schemes of construction suitable for the employment of much labour, because they are in the first case advisory, and secondly, are guides for future planning more than suggestions for immediate action So *that* Committee sat to small purpose.

AN EXHIBITION OF C. F. A. VOYSEY'S WORK

On October the second, this year, an exhibition of the furniture, fabrics, and architecture of C. F. A. Voysey will be opened under the auspices of Messrs. Batsford's and the Architectural Press, at Batsford's Galleries, 15 North Audley Street, W. The exhibition will last for a fortnight. Mr. Voysey is one of the last architects of the old tradition, and the pioneer of modern architecture. He has always been an idealist who rightly considered that the architect should design not only the house, but the furniture, fabrics and colour schemes within it. This tradition had died out with Soane. While every other architect was busy reviving Gothic and Queen Anne, Voysey alone went beyond revivals and experimented in form. He inspired the student, C. R. Mackintosh, who as an architect was perhaps the greatest influence on modern Continental architecture. Such an exhibition is late recognition of a great leader. Mr. Voysey's designs are not only interesting historically, but their intrinsic merit will be ample evidence of how much good work one man may achieve in many branches of craftsmanship.

THE FUTURE OF LONDON

We are fortunate in possessing in the B.B.C. an institution with a lively sense of its best duties to society. This week's number of *The Listener* contains a supplement designed to awaken public interest to the need for planning. The supplement consists of an article by Dr. Raymond Unwin, on "Planning the Future of London," followed by another by Mr. Thomas Adams, on "Looking Forward Forty Years." Dr. Unwin's article is a graphic analysis of the growth of present-day London, based upon his fine work for the Greater London Regional Plan. Within the space of a few pages he covers the complete gamut of planning, though at some sacrifice of interest.

★

Mr. Thomas Adams, less technical, less comprehensive, perhaps, but more imaginative and understandable, is more likely to stir the interest of the average reader to know more about planning, and to want to have London planned for the future. It is significant that he expects no sweeping changes to alter the face of London in forty years, just as the last forty years have seen more changes of method than of actual scene, but he does indicate many things that will be the subject of discussion in other places. It is to be hoped that the B.B.C. will continue this excellent work of public education, upon the initiation of which they will be congratulated by all who realize its importance to us at this time.

DEATH DUTIES REMITTED ON NATIONAL TRUST PROPERTY

It was announced at the annual meeting of the National Trust recently, that the Trust has at last been successful in its efforts to get immunity from death duties on properties left to it. It was a very ridiculous state of affairs when land left for the enjoyment of the nation had to pay taxes, and we may congratulate the Trust on putting matters on such a sensible new footing.

★

The new land taxes now fill the committee of the Trust with the fear transferred, as it were, from the tax they have just escaped. They feel that the steady pressure of this tax burden will force land on to the market, irrespective of whether it is ready or not for development, and in this process much of what the Trust seeks to save will be lost for ever. On the other hand, the exemptions from tax are going to help the difficult job of zoning land for private open spaces, a denomination that has so far largely existed as a pious fiction. The balance, I fear, is not in favour of preservation.

SOMERSET'S COUNTY OFFICES

It is rather too early to say whether the new County Offices for Somerset are to be at Taunton or Weston-super-Mare, though the central position of the first place, and the fact that opposition to the Taunton site comes mainly from interests that will suffer financially and not administratively from the transfer, might possibly lead to the conclusion that the design which Mr. Vincent Harris has exhibited this year will eventually come to pass.

THE REDEMPTION OF HIGH WYCOMBE

The Royal Society of Arts has given a garden party at West Wycombe, the Buckinghamshire village which the Society has bought and is now carefully preserving. It was in 1929 that the Society took the bold step of buying the village, when it came into the open market. Sir John Dashwood made the purchase possible by agreeing to take only £13,500, and he has since contributed generously. Nevertheless, it was a large undertaking, and £8,500 is needed to pay off mortgages on the property, in addition to funds needed for reconditioning cottages.

★

The reasons why West Wycombe was chosen for preservation are first, that it is a village unspoiled for the moment but threatened by adjacent development; and second, that in and around there still is carried on the ancient but vigorous furniture industry that is dependent for its material upon Chiltern beechwood. The Society's action will have preserved what the Prime Minister has called "a fine picture of English life and history."

HASTINGS—

Astragal sometimes makes mistakes, and my recent references to alleged ineptitudes of Hastings Borough Council were founded upon a report which has proved to have been groundless. I apologise, therefore, for such reproving remarks as the occasion had seemed to warrant, and am only too glad to know that the only Pavilion that could have been referred to was that designed by Mr. Cowles Voysey.

—AND MORECAMBE

A week or two ago I breathed a pious hope that out of much worthless and dull architecture in Morecambe the one really charming building on the sea-front, the old L.M.S. Hotel, could be saved or used as a model for a new hotel instead of being pulled down. It seems from the articles and leading articles of local and north of England papers that I have been charged with a senseless attack upon Morecambe because I found the town very dull, and this old hotel charming. Among other things, I am charged with not having seen the town, of writing lightly from a casual visit, and so on. I am also accused by the Editor of the local newspaper of having no judgment in matters architectural, since I have failed to remark the beauty of the "Town's Newspaper Office." This is very distressing, because I write from a personal knowledge of the place, and can recall most vividly the thrill of finding that nice old building on the sea-front looking so much a gentleman out of his element. I know also that there are those in Morecambe that are very much of my opinion. The pity is that such people have little say in the disposition of things architectural.

ASTRAGAL

THE NEW WHITGIFT GRAMMAR SCHOOL

Haling Park, South Croydon

DESIGNED BY LEATHART AND GRANGER

The main entrance from the terrace to the assembly hall, which occupies a central position in the eastern façade. There is a similar secondary entrance at the south-easterly corner of the hall.

LIKE so many schools, Whitgift began life as a charitable organization. The original building, which accommodated "a warden, a schoolmaster, and twenty-eight poor brethren" was founded in 1599 by Archbishop Whitgift (b. 1530, d. 1603), and was known as the Hospital of the Holy Trinity: it stands to this day in Croydon on the corner of George Street and High Street.

The grammar school that is now superseded was opened in 1871, and was built from the designs of Arthur Blomfield.

Haling Park, the site of the new school, has historic associations. In 1456 Thomas Warham owned a manor-house at Haling. His son sold the estate to Henry VII in 1536 for £710. Queen Mary granted the manor of Haling to Sir John Gage at an annual rental of £15. The eldest son of Sir John Gage was subsequently committed to the Tower for conspiracy against the Crown in 1590, and the estate was forfeited.

Queen Elizabeth let it to Howard, Earl of Effingham, Lord High Admiral of the English fleet which defeated the Armada. Lord Effingham died at Haling in 1624. His association with the site is commemorated by a great bronze weather-vane on the turret, in the form of a sixteenth-century English galleon.

This view of the main east front, taken from the cricket field, shows the steps and terrace walls that are part of a scheme intended eventually to provide a ceremonial approach to the buildings from the Brighton Road.

The building of the new school was commenced in January, 1930. It is planned on the quadrangular principle, and accommodation has been provided for 750 boys. The great hall, with its stage and gallery, forms the east side of the main quad. Around the remaining sides are grouped the class-room blocks and the library. On the north and south ends of the hall are the main entrances, and adjacent to these are the boys' entrances, changing rooms and lavatories.

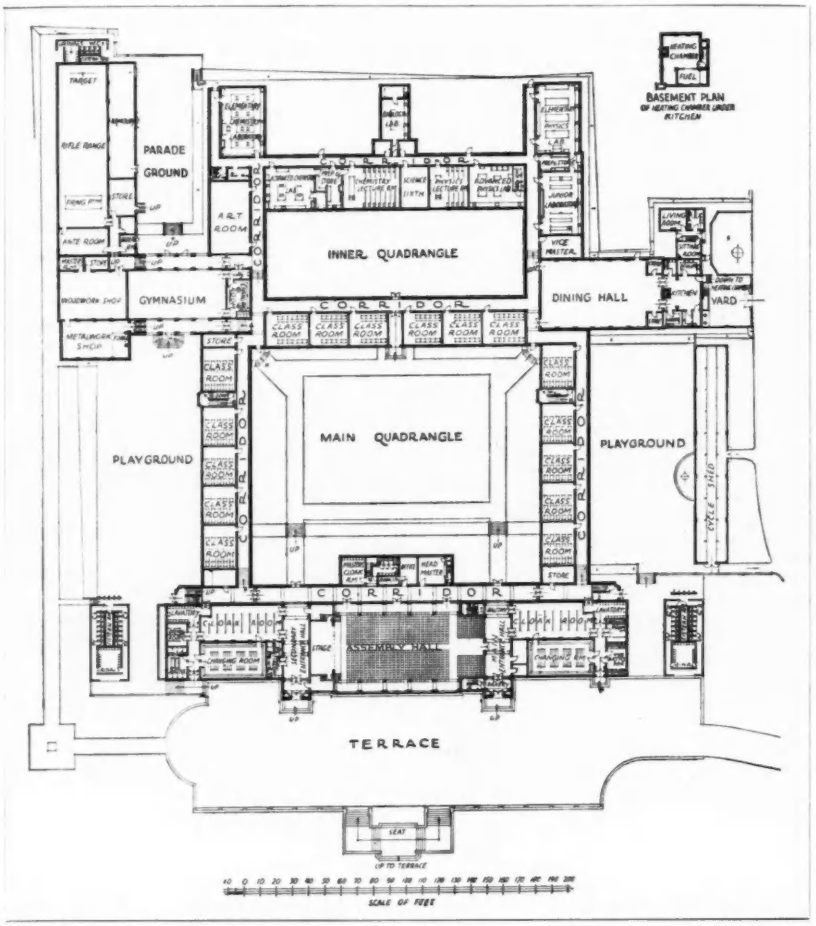
Behind is an inner court, lighting the laboratories and lecture theatres of the science section of the school.

On the north side, between the two quadrangles, are the dining-hall, kitchen and service, and caretaker's house. On the south side the gymnasium and manual training departments occupy a corresponding position. The O.T.C. department on the west of the gymnasium block includes a 75-yard miniature rifle range, armoury, serjeant-major's office, and a store, in addition to a parade ground.

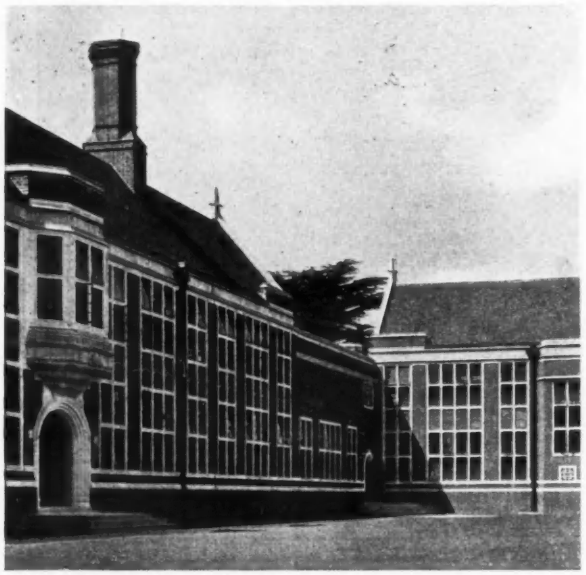
The entrance to the school at present is from a side road, and the entrance gates are flanked by a porter's lodge and a cricket pavilion. Eventually the ceremonial approach will be from the main Brighton road.

At the request of the Governors of the school, the architects have designed the building to accord with the Elizabethan associations of the Whitgift Foundation.

Red brick walls, Bath stone dressings, tile roofs, with oak joinery and flooring, are the main materials employed in the building, the cost of which, on completion, will be about £120,000.

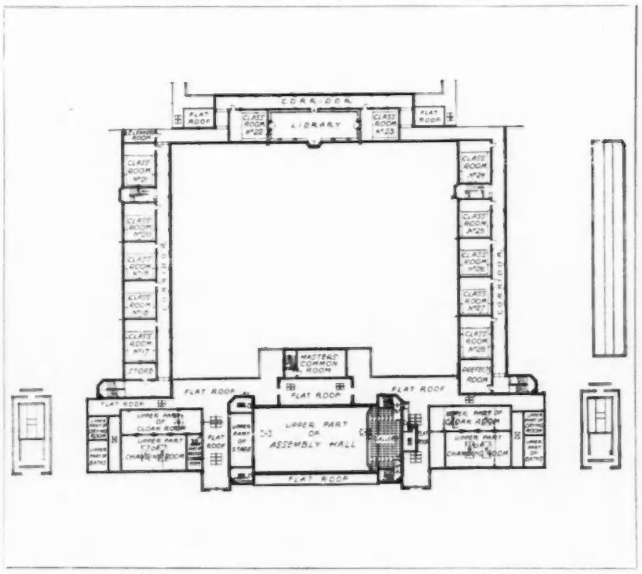


The ground plans, showing also the layout of the terrace and the playgrounds which flank the main part of the building, planned to enclose a quadrangle. The front, facing the terrace, looks east.

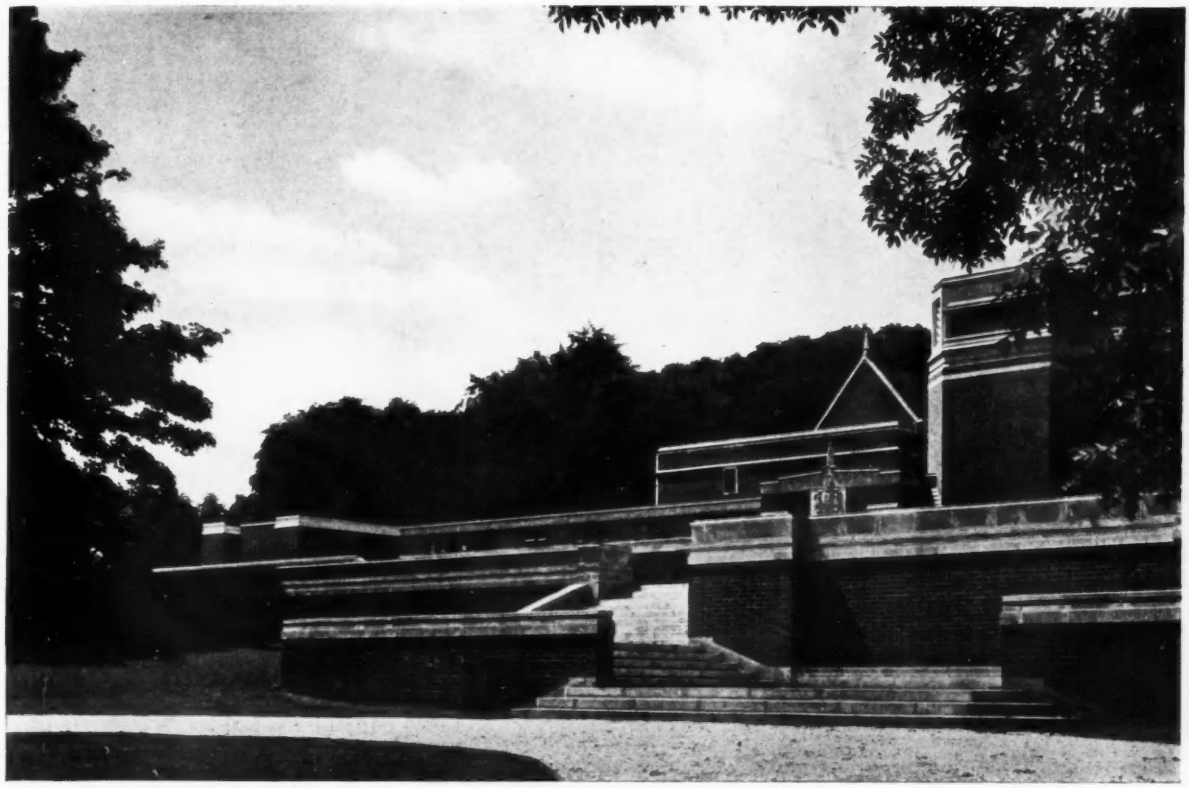


Whitgift Grammar School, Croydon.]

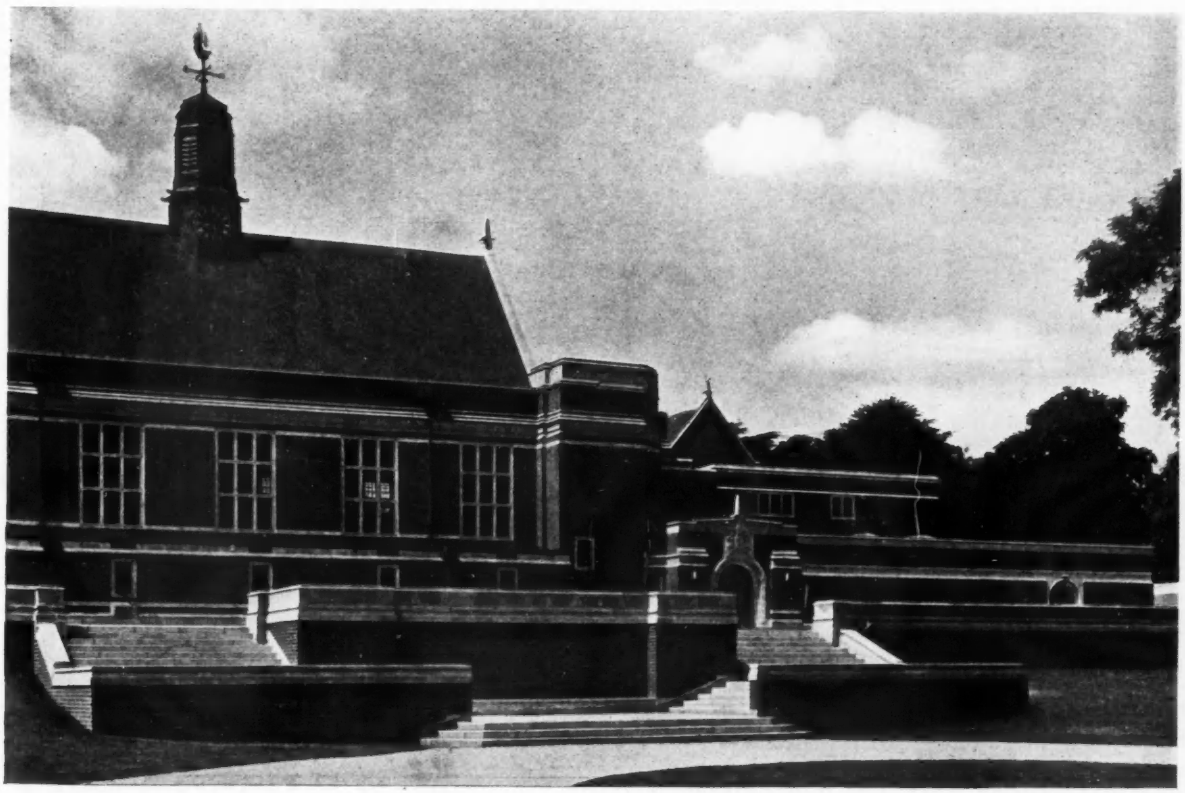
A view in the main quadrangle, showing the junction of the north and west classroom wings. The library is marked by the first-floor bay window seen on the left.



The first floor of the central building. The assembly hall extends into the first story, and opposite to it, on the other side of the quadrangle, is the library; classrooms are arranged in either wing.



The end of the south classroom block, with the south changing rooms, seen from below the lower terrace. The buildings occupy and enclose 3½ acres of a 33-acre site.



[*By Leathart and Granger.*

The assembly hall from the lower terrace, showing the main entrance and staircase tower to the public gallery, with beyond, on the right, the end of the north classroom wing.

[*By Leathart and Granger.*

The interior of the assembly hall, from the public gallery, looking towards the stage. The designs show, in general, a modern expression of the Elizabethan flavour.

Whitgift Grammar School, Croydon.]

A view looking across the southerly playground, and showing, on the right, the south classroom wing, with the gymnasium arcade in the distance.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xi

THE RESIDENT ARCHITECT

BY KARSHISH

(H. B. CRESWELL)

GARSTON and I did not have to wait long for the fruition of Hargreaves' introduction. We were, at this time, bound in that unreserved intimacy of friendship which only youth allows so that Garston's interest in the opening of this new door was almost as great as mine was. The inward solitude which sunders human beings, as though—in the words of R. L. Stevenson—they were "islands shouting to one another across seas of misunderstanding," belongs to later years. Four days after my meeting with Hargreaves, I received the following letter:

THE EUREKA PLOUGH CO., LTD.
Albion Works,
Nollingborough.
Date .. February 14th, 1899.

Mr. Barnard Whistlom,
14, Charles Street,
Adelphi,
London.

Dear Sir,

re ARCHITECT.

We are desirous of filling the appointment for the situation of Resident Architect in connection with alterations and additions to above, and understand from Mr. L. P. Hargreaves, of Messrs. Brandon, Hargreaves and Stook, Consulting Engineers, that you are open to apply for same.

Our Chairman and Managing Director, Mr. Steffinson Stevenson, J.P., will be in Nollingborough Wednesday and Thursday next, and Tuesday week following, and we will thank you to inform us the earliest you can attend at these offices for the purpose of discussing the business, and which we trust will suit your convenience so that same will not be delayed.

The favour of your earliest reply is solicited.

We are, dear Sir,
Yours faithfully,
for THE EUREKA PLOUGH CO., LTD.,
p.p. H. T. FOULKES,
Secretary.

This letter dashed expectations, but fortified hopes. It is true Garston jeered at the diction, pointing out that alterations and additions to an architect were required, that I was asked not to delay my convenience and that not the following Tuesday but Tuesday in the week after it was named; but I felt much flattered by the value the firm appeared to attach to my services. Garston, who was a powerful thumb-and-fore-finger typist—for he always grasped at new devices—stumped out a reply on our jointly-headed letter-paper. I named Thursday so as to avoid the ambiguity of Tuesday, and also any appearance of breathless eagerness in my response; and I overbore Garston in his proposal to sign for me "per sec." At ten minutes to eleven on the appointed day I found myself walking from Nollingborough station through the central "Cow Street" of a queer diminutive town; past its little, new, abject clock-tower, boasting itself in the Market Place with a bell like the clang of a crow-bar, making my way to "Winchcombe" in the Luffport Road—the private residence of Mr. Steffinson Stevenson, J.P.—as instructed by telegram the day before.

"Winchcombe" proved to be an enormous, showy villa, standing in the country at the limits of a residential quarter. The house had evidently been accidentally dropped, forty years before, from a passing balloon; and, by great good luck, had landed in a large garden of the "landscape" class, where assorted evergreens had been planted out by birds and squirrels in those places where, in the past, chance had disturbed them at their meals. This fortunate circumstance disarmed astonishment at the lack of any relation between the house and the grounds, for no other position could be either better or worse. The scene, therefore, left nothing to be desired and nothing to be regretted, and (philosophic) perfection was, accordingly, satisfied.

I passed up the entrance drive between a pair of monkey-puzzle trees of unequal growth—like a father attended by his crippled son—to the front door, which was opened by a large flabby butler, suffering from advanced diabetes, who wore a black tie and full evening dress marked with food-stains.

By him I was invited into an entrance hall inadequately lighted, partly by a skylight high up over the stair-well, and partly by a window blocked with a shrubbery. Here—while the invalid went heavily off to find out what he was to do with me—I was left standing on a Turkey carpet in company with a thickly-carved mahogany grandfather clock with a glass front to display its brass weights, and a smell of hot apple tart.

I believe myself to be unusually sensitive to small towns, villages and houses; they have for me the instant appeal of individualities, and nothing in the world gives me a more insatiable joy than experiencing the beauty of them, or a happier preoccupation than allowing my mind to take colour from their expressiveness. The whole atmosphere and significance of Nollingborough and "Winchcombe," at that time, was entirely new to me, and the occasion has stamped my first impressions in my memory. I was engaged by a queer kind of amused wonder which touched on contempt; and this was in great measure sustained when I was ushered into the ominous presence of Mr. Steffinson Stevenson; for I had never met his kind before, and he exactly fitted his pinchbeck setting. I found him in a large room, surrounded by glazed mahogany bookcases in which handsomely-bound files of *The Illustrated London News* were prominent; and he stood up behind his heavily-carved pedestal table of pollard walnut, to receive me.

He was a tall, well-set-up man of forty-five, with luxuriant, wavy, chestnut hair and a long stiff beard of which I tasted the full magnificence when he thrust it forward in throwing back his head to look at me under his spectacles. This action had the added convenience of allowing him to scratch himself behind the chin with the tips of his fingers, which he held straight and rigid, knuckles outwards, hingeing at the elbow, for the purpose. The ritual did not, as I was to learn, merely accomplish an act of refreshment; it served also as a gesture signifying contentment of soul, so that I ought to have been greatly encouraged, instead of mildly amazed, when he deliberately indulged this solace of the toilet with audible thoroughness in my face. I got to know him so well and esteem him so highly—although he greatly tormented me—that it is curious now to recall the moment of our first contact.

Mr. Stevenson ended his chin-congratulations and his scrutiny of me with a short cough; invited me to a chair placed conveniently for visitors; seated himself; and referring to papers lying before him, began:

"Ahem—I understand you have completed your apprenticeship, Mr. Whistlom?"

I told him what experience I had had, and added: "My name is Whistlow, sir; and Bernard, not *Bar*nard. I think Mr. Hargreaves' writing could not have been clear."

"I see—ahem. Yes," he said, making a note. "Ahem, I will now invite your attention, Mr. Whistlow, while I commence with a brief resume of the proposition."

He then told me that his firm had three years before built the Albion Works at Nollingborough, whence they had removed from Ipswich. He

and his co-directors had "become tired" of their Nollingborough architect and wished to have someone in their employ to look after the maintenance of the existing works and direct the numerous alterations and additions immediately needed to enable them to cope with orders for their "Rockingham Reapbinder."

"You were not perhaps aware, Mr. Whistlow," he said, "that we are the manufacturers of the celebrated 'Rockingham.'"

"I don't think I ever heard of it before, sir."

"You astonish me! Surely you have observed our world-famous poster—the picture of Mont Blanc with the words: "The Rockingham is supreme among Reapbinders as Mont Blanc among Swiss Mountains?"

"French."

"I beg your pardon?"

"Mont Blanc is in France, sir, not Switzerland," I said.

He stared at me. "I would desire you to know, Mr. Whistlow," he said, "that we have used that advertisement for a great number of years and never heard one word of complaint."

"Really! But as a fact, sir, Mont Blanc is, I assure you, in France."

"Ahem. Possibly—as a technical refinement, no doubt, that may perhaps be said," Mr. Stevenson decided; and he resumed his description of his Works which were evidently very fine ones indeed.

Will it be believed that two minutes later I put him right again! I was, I suppose, strung up to give a good account of myself, and my lingering callowness and native tenacity led me to this folly. He spoke of an occasion "At Hyde Park Corner—opposite the Marble Arch," and I at once said:

"You are thinking of the Collonade, perhaps, sir."

"Mr. Whistlow, I will thank you to allow me to asseverate that I am *not* thinking of *any* Collonade."

"Oh! Perhaps, then, the arch at the top of Constitution Hill, sir."

"I am doing nothing of the sort. I am speaking of the MARBLE ARCH."

"Then you do not mean Hyde Park Corner, sir. The Marble Arch is at the west end of Oxford Street."

He stared at me in blank amazement, and then, abruptly and with an air of retribution, brought a great atlas from a bookcase and turned to a map of London in an early page of it to settle my miserable hash; but poke his heavy nose, as he did, ever so closely down to it, he could find no consolation.

"Ahem—er—you are perfectly correct, Mr. Whistlow; and I am astonished how I obtained such an inaccurate impression; but—ahem—I am not very frequently in that district of the Metropolis."

If the map could have shown me to be wrong, I should never have settled at Nollingborough. I was afterwards told by those who knew him, that Mr. Stevenson was probably enormously impressed at my not appearing to want what he had to offer—as will appear; but it was undoubtedly the idea of my firmness and self-confidence which my gaucheries gave him, that led him to offer me the appointment. I record the interlude because, if I did not do so, what follows would be inexplicable. The thing befell exactly, and almost word for word, as I will now recite; for my memory of the scene has always been a vivid one, and nothing but the fact can persuade credulity. I can only comment that things happen in life which would do violence to our sense of what is admissible in fiction.

After Mr. Stevenson had pushed aside the atlas, he gave me a precise account of what the duties and conditions of service were to be; and he then opened a quarto manifolding book and prepared to write.

"I take it, Mr. Whistlow, that you have a thorough acquaintance with constructional steelwork," he first said.

"Well, sir," I replied. "I am afraid my experience is limited to its general uses. I have no knowledge of the stanchions with the overhead traveller girders you speak of." In saying even so much as this, I did myself full justice.

He wrote, and then addressed me again.

"You, of course, thoroughly understand quantities, Mr. Whistlow?"

"No, sir; in London quantity-surveying is a separate profession," I told him, and added, with a sincerity that was evidence of complete ignorance—had my questioner but known: "I could, however, no doubt acquire the necessary knowledge."

Again he wrote, and then asked me his third and last question:

"You have, I understand, had experience of commercial building."

"No, I'm afraid not, sir," I said, frankly; and then, with the last flame of hope extinguished, added: "It is almost the only class of building I know nothing about."

Mr. Stevenson continued writing industriously for some minutes after this. Then he looked up in the middle of a sentence, with his pencil poised, and said:

"I have assumed that you desire to make application for appointment to the situation, Mr. Whistlow."

I was so much taken by surprise at this that I hesitated, while my mind span in an effort to realize what I was committing myself to.

"——Subject, of course, to you finding everything at our Albion Works to your satisfaction," Mr. Stevenson added hastily.

"Yes. Oh, yes. Subject to *that*, certainly," I blurted, perceiving the door would remain open to retreat.

Thus this astonishing interview ended. Mr. Stevenson finished his letter; tore the sheet from the book; addressed an envelope and gave me *The Times* to look at while his carriage was being got ready. He then accompanied me to the entrance hall—where the apple tart was triumphantly drawing more near, like a drum-and-fife band; asked me to hand his letter to Mr. Foulkes, the secretary; explained that there was a mid-monthly board meeting that day which he was not going to attend as he had taken a slight chill; said good-bye, and gave me a protracted chin-salutation from his threshold as I drove away.

I was taken back through the town and down a hill to iron gates blazoned ALBION, which stood a hundred yards in front of the offices of the Eureka Plough Coy., Ltd. This was a formidable red brick building, sparsely trimmed with Mansfield stone skewbacks to the flat window arches, and saddles to the gables, and in other tasteful ways. The many gables were further enriched with an outbreak of blue and red Ruabon fireplace tiles, arranged chequerwise and each embossed with a *fleur-de-lys*; while the central entrance was marked by a Romanesque arch of noble proportions carrying a fourteenth-century moulding and label and supported on semi-detached columns with caps left boasted—the whole, in fine large blocks of Mansfield, built on to the face of the wall as a decorative feature to mark the square-headed, panelled and stop-chamfered, varnished, pitch-pine double doors;—the whole so varied and handsome that my effort to describe it in one sentence makes me breathless. I supposed that I was looking at some sort of architecture; but the only association in my mind was the picture on the bags containing Tidd's chicken feed, familiar to me in childhood. This, however, was the building that had made the voice of the company's chairman thrill when he described it to me, and my swelling enthusiasm for commercial architecture was checked.

At the door I was met by an ex-sergeant of the Dragoon Guards in a toffee-coloured tunic and two medals. His name was Bates, and he took my letter and my name to Mr. Foulkes, and after a few minutes a little, fair, bird-like man came down to greet me. By him I was conducted upstairs, and after exploring silent and deserted upper corridors—for the hour was that known in provincial commercial life as

"dinner"—I was introduced to Mr. Peterson and Mr. Gregory Hart in the directors' lavatory, where they—so to speak—belonged, for these were two of his co-directors referred to by Mr. Stevenson.

I was first invited by these gentlemen to lunch with them in the directors' dining-room, where we were served by Bates with leg of mutton and two veg., pud., cheese-and-butt. and three coffs. The food was excellent, and my companions agreeable. Peterson was a landed gentleman of considerable estates in another county, and was a director by virtue of his large holding in the company and without any other sort of qualifications whatever, for he was no more than a large, inquisitive, petulant child. Hart was a very different man—a mechanical engineer of high attainments who was a well-known consultant in Victoria Street, Westminster. Not a word of any business was spoken, and I was made completely at my ease—a circumstance that owed not a little to Peterson's asking: "Are you any relation to Captain Whistlow, the Newmarket trainer?" When I replied that he was my father's first cousin, Peterson turned to Hart and broke out in a tone of astonished admiration that was almost half-witted:

"Why, Walter Whistlow has trained my brother's horses for twenty years!"

His amazement at this coincidence was absurd: he stared at me and then at Hart, by turns, and seemed almost scared.

Hart said: "Well, we most of us have cousins, you know, Peterson!"

Punctually, at two o'clock, Hart got up. "You had better have a look round the works, Mr. Whistlow," he said; and I went out with them into an entirely new world. Of that world I shall have occasion to speak later.

When, in an hour's time, we returned to the offices, Hart told me that a board-meeting was about to be held, and that I should be called before it shortly; and I was then turned into a luxuriously furnished private office by Foulkes to await the event. Ten minutes later an inner door was opened, and he reappeared and asked me to "be so good as to step this way, Mr. Whistlow"; and I passed into a much larger room, with a cloth-covered table down the middle of it, where the board of the company's directors was assembled to the number of two: Hart was in the chair, and Peterson at the side of the table next to him. The atmosphere was, however, entirely different from that of our luncheon party.

I perceived at once that they had decided to appoint me. A few formal questions were asked by Hart, and some trivial and rather foolish ones by Peterson. I felt a mistake was being made and, almost in protest, I said: "Really, I could not undertake the kind of steel construction I have seen today."

"That will be all right, Mr. Whistlow," said Hart, brushing my objection aside. "We are all engineers here, and will see you through." So was it settled; but after various subsidiary matters had been agreed and I found myself walking to the gates between beds of geraniums which showed off the piles of broken packing cases that covered the place, I wondered, with some uneasiness, whether I had been wise in engaging myself; and although my doubts were well justified—for both the town and the works were antipathetic to me, and both seemed remote from associations of architecture—those doubts would probably have been far less pressing had my success proved more difficult. If Mr. Stevenson was impressed by my not appearing to want what he had to give, I, on my part, was suspicious of his readiness to give what I hesitated to accept.

It is well we cannot know what lies ahead of us; for if that day I had been able to foresee the frustration, discouragement and spiritual enervation that the future held in store for me, I might well have turned tail and quitted the place: yet what, I wonder, would have happened to me if I had done so? I might never have got fairly on to my own legs as an architect at all, for I can see, now, that it was necessary for me to take deep draughts of gruel before I truly found myself; and it was gruel, thick and slab, I got at Nollingborough, and plenty of it. Whether for good or for evil, my move to Nollingborough was the crucial event of my life, and it is for this reason that I have recited the circumstances of it in such detail.

NEXT WEEK—XII: AN ARCHITECT'S EARLY GRUEL

The previous instalments appeared as follows:

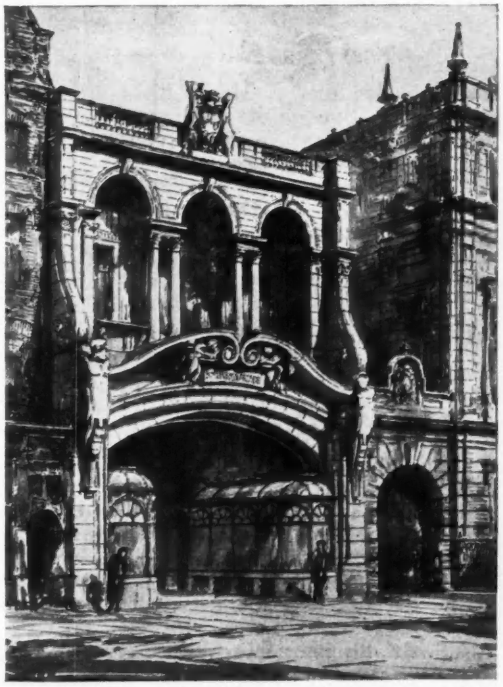
May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.
July 15. viii: Joe Richards: Foreman.
July 22. ix: Trials of a Clerk of Works.
July 29. x: A New Venture.

LETTERS FROM READERS

Burlington Arcade

SIR,—Professor Beresford Pite's design for a new lower story to the Piccadilly entrance to the Burlington Arcade is, surely, a valuable contribution to West End architecture. Viewing the composition without stylistic prejudice it is an amazingly ingenious solution of a very difficult problem.

It is evident that the architect was presented with the very reasonable demand for the maximum unobstructed entrance space to the Arcade; and it would evidently be desirable to effect this without modifying to any great extent the upper story. To support satisfactorily a triple arcade on a single arch is a matter of the utmost difficulty, but the double arch which has been introduced satisfies the eye completely from a structural point of view, whilst the softer lines of the broken pediment above serve to make a harmonious transition between the vigour of the lower arch and the delicacy of the upper arcade. The adjustment of planes in order to give all portions of the design their due emphasis, is managed with all the subtlety of the fully-developed baroque. The whole composition is closely studied in relation to its neighbours, so that the low archway of Burlington House slips into place as a harmonious connecting link. The ingenuity of the omission of the orthodox central motif between the scrolls of the broken pediment, in order to avoid a feature competitive with



A sketch of the new Piccadilly front of Burlington Arcade, designed by Professor Beresford Pite and Partners.

the achievement of arms in the upper story, should surely delight anyone who can appreciate the finer points of composition.

The placing of the sculpture might serve as a model for the placing of the human figure in relation to architectural forms. The figures by their mass fit into the composition of the whole, but they seem, in addition, to be themselves aware of the intention of the composition and to direct their glances where the spectators' eyes will naturally follow them.

If the design is technically of exceptional accomplishment, it is something more. The sentiment which pervades it shows keen appreciation of the peculiar character of Piccadilly. It is perhaps not too fanciful to observe in all the detail a suggestion of gentlemen's haberdashery; something of the ornamental but substantial; a nice appreciation of the lighter side of respectability, producing an association of ideas in sympathy with the kind of trade for which the Arcade has become famous. The terminal figures, if not very distinguished, regarded as pure sculpture, should be sympathetic to the older and gayer members of clubland.

Modernists will regret that the design is not in what they hope to be the main stream of architectural development, but a work which combines the quality, so rare in modern architecture, of vitality with the even rarer quality of humour, rises above purely temporary considerations of style and should be judged on its own merits.

H. LEWIS CURTIS

The I.A.A.S.

SIR,—I notice that a Mr. William Davidson asks, through the medium of your JOURNAL, some questions concerning the I.A.A.S. (see issue for July 22). Is there an ulterior motive?

However, perhaps Mr. Davidson is a virtuous young architect seeking information and endeavouring to uphold the dignity of the profession we serve.

A builder who has a sympathetic instinct for design, which is developed and encouraged by good architectural tuition, is perfectly at liberty to give up the trowel for the pencil, and I consider that such a man makes a far better architect than the academic architect.

If Mr. Davidson chooses to borrow the *I.A.A.S. Year Book* and study it, he will no doubt find a great number of names of men who have, at least, had a fair architectural education. It is a pity that he did not take the trouble to have applied to the secretary of the I.A.A.S. for his information, since it might have saved him an admission of apparent ignorance.

For Mr. Davidson's information the I.A.A.S. has two sections, one for architects and the other for surveyors. It often happens that a *bona-fide* and qualified surveyor combines estate agency with his business, which surely is not a crime! And I have also heard of borough engineers, etc., having the audacity to call themselves surveyors. I was recently told of a case of a gentleman holding a senior architectural degree practising as a rating surveyor, and I personally know of another of like degree who runs a separate firm of house and estate agents, under his name and that of a partner.

In conclusion, if Mr. Davidson is a man of riper years and desires to join the I.A.A.S. on practice qualifications, he should apply, and if his credentials pass the standard set by the Council of that Association, he would be privileged to belong to a virile and progressive architectural body, which watches the just interests of young and older architects alike. WILLIAM HORSMAN

Architects (Registration) Act

SIR,—The Council of the R.I.B.A. have received with the deepest satisfaction the news of the passing of the Architects (Registration) Act, which has been one of the main objects of their policy for many years past. They know how greatly they are indebted to the architectural journals which have given their support to the campaign for so many years. Their help has been invaluable at every stage in forming and steadying opinion within the profession, in giving convincing expression to the underlying principles which have inspired the campaign, and in dealing, where necessity arose, with the objections of the opponents of the Bill. Without this steady and disinterested support, it is very doubtful whether the Bill could ever have reached the Statute Book.

The Council have directed me to send to you personally, and to THE ARCHITECTS' JOURNAL, a very cordial expression of their gratitude.

They are confident that, in years to come, it will be universally recognized that the passing of the Act has been a real service to the community, as well as to the architectural profession.

IAN MACALISTER
(SECRETARY, R.I.B.A.)

QUESTIONS THAT ARISE

Plastered Walls

H. J. E. writes: "*I have recently experienced trouble with plasterwork to brick walls in some building work which has come under my supervision. Portions of the walls, when tapped, give out a hollow sound and in places have become detached from the wall. I was quite satisfied with the materials used, and I approved these. The mixture was one of lime and putty to three of sand for the floating coat, and plenty of hair was added. I have noticed a number of houses in course of erection in the locality where the floating coat is badly cracked. Would this be caused by poor materials?*"

The cause of the failure of the rendering to the plastered brick walls is not necessarily the use of poor material. It may be found that the bricks are too smooth, and in that case the joints should be well raked out. A brick with a smooth face will not absorb sufficient moisture and will not allow the plaster to adhere, causing the work to dry too quickly and crack or fall away.

Another point which is frequently overlooked is that the brickwork is not wetted prior to rendering. It is essential, to obtain a good job, that the walling is properly prepared. It is surprising the number of workmen who avoid the use of water to wet the brickwork when engaged in building brick walls. W. A. D.

Canadian Timbers

F. J. L. writes: "*I find the names of Canadian woods very confusing. One reads about Douglas fir as an excellent Empire wood, but in Canadian papers I come across such timbers as Alaska pine, Prince Albert fir, Douglas spruce, Oregon pine, hemlock spruce and a wood called Norway pine.*

Are these woods confined to Canadian use only?"

The bewilderment of your correspondent is very natural and is shared by many. Most of the names quoted are in reality different descriptions of the same wood.

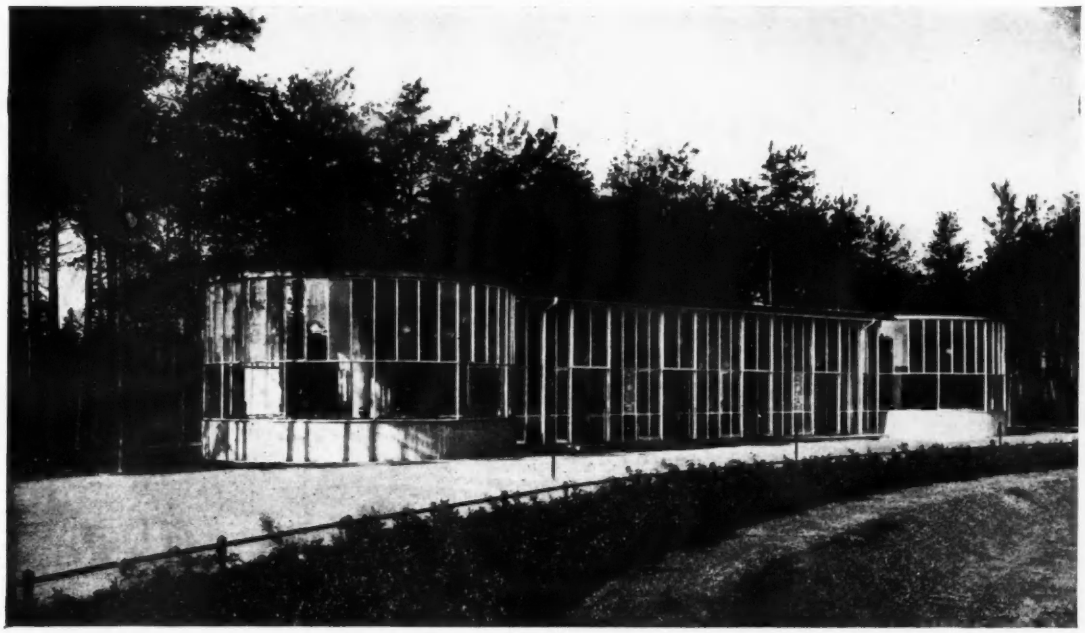
Douglas fir is also called Red fir, British Columbian fir, Douglas spruce, and Oregon pine. As the wood is not a true fir it was in the early days exported as a pine or a spruce, but now it is so well known, the term Douglas fir ought to be standardized.

Eastern hemlock is also known as hemlock spruce and hemlock fir. Western hemlock goes by the name of Prince Albert fir, grey fir, Alaska pine and silver fir. Perhaps the most confusing term is Norway pine to describe Canadian red pine.

At present, in this country, there is a deplorable vagueness in specifying, some woods being described as from their place of origin, and others in accordance with species. LL. E. W.

A GLASS-CONCRETE STADIUM CAFÉ IN GERMANY

DESIGNED BY O. E. SCHWEIZER



The whole of the front of the café is formed of glass screens, the two circular ends being entirely enclosed. For rigidity, reliance is placed on the substantial back wall.

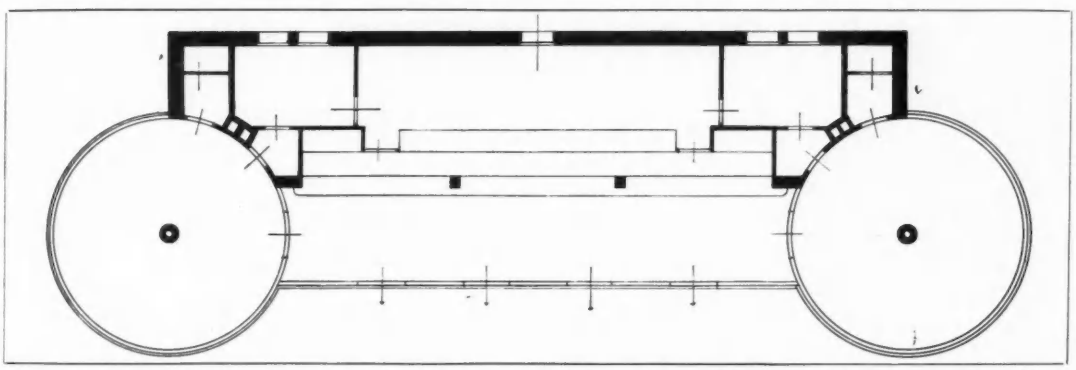
THIS is the second of two cafés, designed by O. E. Schweizer, to be erected in the grounds of the Nüremberg Stadium, Germany. It is situated at the head of the horse-shoe-shaped garden enclosure, and adjoins the back of the grand stand.

Schweizer has contrived, by his skilful placing of this little building, to give the grand-stand area a more defined and spacious compactness, and at the same time, by means of the delicacy and cheerful lightness of a glass building, to create an offset to the severe back elevation of the grand-stand itself.

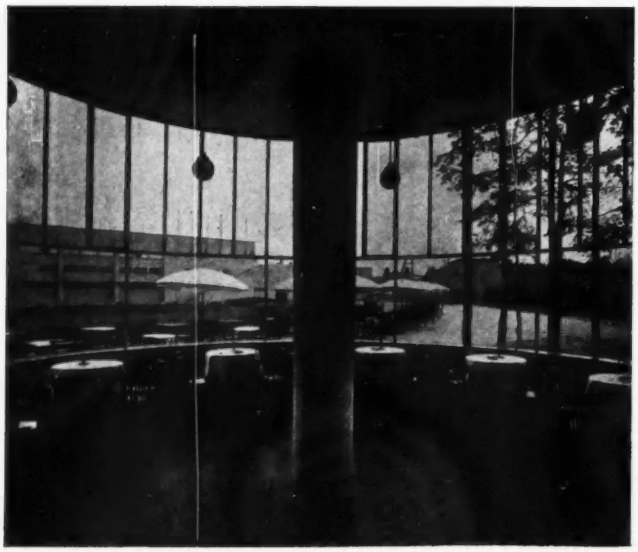
The attractive layout of a buffet linking up two circular lounges arises from the necessity of combining a large buffet space, that makes feasible the convenient service of numerous visitors, for the most part circulating in the open air, with a certain amount of space under cover and enclosed. The desire to make these two circular rooms also available as spectators' rooms, like the garden service with the free space of the buffet, dictated the construction of the entire front in glass screens, which are supported by the concrete roof.

The circular rooms are constructed separately from the buffet building. They represent shelters of concrete construction, with central pillars supporting the circular roofs. A slight slope of these roofs towards the central post allows of rainwater draining away down the hollow pillars. The building retains rigidity from the massively-built back wall of the buffet, which contains, in an ingenious plan, also lavatories and two separate rooms for kitchen and store.

The charm of the elevations is enhanced by the impalpability and transparency of the glass construction. An unusual impression arises if, in perambulating in the grand-stand enclosure, the round glass kiosks are seen in front of the grand stand. The great severe building contrasts well with the glass architecture, which owes its individual and fanciful character to architectonic unity : to wit, the application and blending of the architectonic elements of today.



The ground plan, showing the two circular kiosks, connected by a large buffet space. The planning also affords lavatories, and a kitchen and store-room.



Stadium Café, Nüremberg.]

A view from inside one of the circular lounges, looking across the grand-stand enclosure towards the stand itself, which was designed by the same architect.

[*By O. E. Schweizer.*

A progress photograph, looking the length of the buffet space, showing some of the constructive details in concrete.

HOLIDAY SKETCH CLUB COMPETITIONS: RULES

1. Two more competitions are to be held to cover the 1931 holiday season, the closing dates of each being in the middle of August and September respectively.

2. The competitions are open to any reader of THE ARCHITECTS' JOURNAL.

3. Two prizes, a first prize of Ten Guineas and a second prize of Five Guineas, will be awarded in each month's competition for the best and next-best sketches sent in.

4. Competitors may enter for either or both of the two months indicated, if they choose, but no competitor can win more than one prize.

5. A maximum of five drawings may be submitted by individual competitors for each month's competition. Such batches must be sent complete under the same cover.

6. The size of the drawings is not to exceed that of Royal drawing-paper, i.e. 24 inches by 19 inches.

7. All drawings should possess some definite architectural or craftsmanship interest, but they need not be exclusively concerned with buildings, and drawings of boats, vehicles, etc., will also be eligible.

8. The drawings will be judged by the Editor of THE ARCHITECTS' JOURNAL, whose decision will be final.

9. Entries for the first competition, that for July, have already reached the Editor of THE ARCHITECTS' JOURNAL. The result of this competition will be announced in THE ARCHITECTS' JOURNAL for August 12.

10. Entries for the August competition should reach the Editor of THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate, Westminster, S.W.1, between the first post on July 15 and the first post on August 17. The result of the competition will be announced in THE ARCHITECTS' JOURNAL for September 9.

11. Entries for the September competition should reach these offices between the first post on August 18 and the first post on September 15. The result of this competition will be announced in THE ARCHITECTS' JOURNAL for October 7.

12. A motto of one word is to be chosen by the competitor, who will remain known by this motto until the award has been made. Only then will his identity be divulged.

13. Each entry must be accompanied by a sealed letter giving the competitor's name, address and occupation (whether principal, assistant or student). The letter should also state that the competitor will observe the rules of the competition and that the drawings submitted are his work, executed on his holiday this year. It must be enclosed in an envelope sealed with a blank seal and bearing nothing but a motto label on which is written the motto chosen by the competitor and the number of drawings entered. Copies of this label will be found in THE ARCHITECTS' JOURNAL during the period covered by the competitions.

14. Each drawing must bear on the back a similar motto label bearing the competitor's motto and the number of drawings entered. No other means of identification must appear on the drawing. Drawings bearing a signature will be disqualified; so will drawings not bearing the printed motto label.

15. Owing to the drawings being submitted under a pseudonym no acknowledgment can be sent.

16. THE ARCHITECTS' JOURNAL will publish a selection of the drawings submitted.

17. No responsibility can be taken by the Architectural Press for loss or damage.

The front of the building at present provides living accommodation for the secretary, intended, later, to be used as offices. The site is some twenty-five acres in extent, and is to be used partly for training camps.

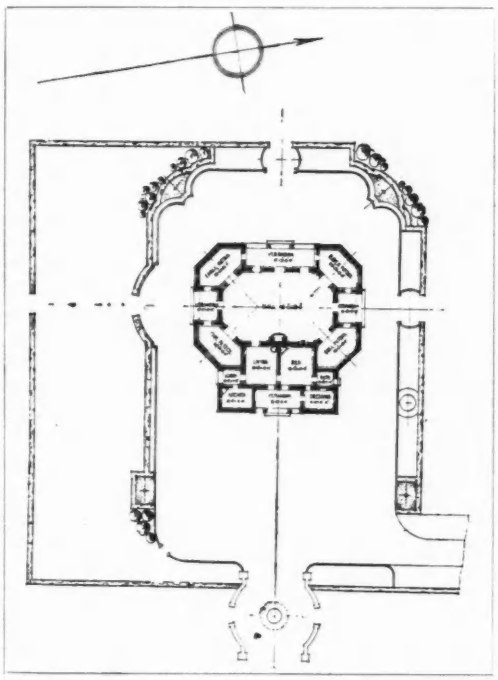
HEADQUARTERS FOR THE PUNJAB BOY SCOUTS

DESIGNED BY R. W. H. VALLIS

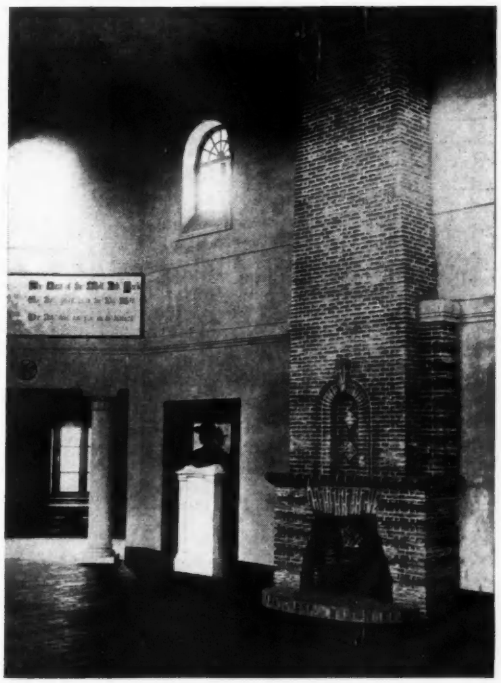
THE accompanying two photographs and plan illustrate a new building situated about eight miles from Lahore. It will form the permanent headquarters of the Punjab Boy Scouts' Association and a rallying-place for scoutmasters' training camps.

The building consists of an octagonal lecture and drill hall, 42 ft. by 28 ft., at the corners of which are rooms for the four patrols—Eagle, Owl, Raven and Bull—fitted with teak wood lockers and seats. The main hall, which is 27 ft. high, has a coved ceiling, formed in wallboard, and a polished teak wood floor. The fireplace is built in 2-in. bricks, set in white cement, and is fitted with a cast-iron dog grate.

The front portion of the building provides accommodation for the secretary, consisting of living-room, bedroom, dressing-room, bathroom and kitchen. It is proposed in the future to build a separate bungalow for the secretary: these rooms will then be used as offices. The building cost Rs. 40,000 (about £3,000).



The plan and layout, showing the main octagonal lecture and drill hall, placed centrally, with patrol rooms at the corners, and the secretary's quarters on the front.



The chimney in the central hall is in 2-in. bricks, set in white cement. Over the openings to the patrol rooms are scout mottoes; in the frieze a fresco is to be placed, illustrative of scouting activities.

A general view of the front of the house. The economy of a flat roof enabled an extra story to be built.

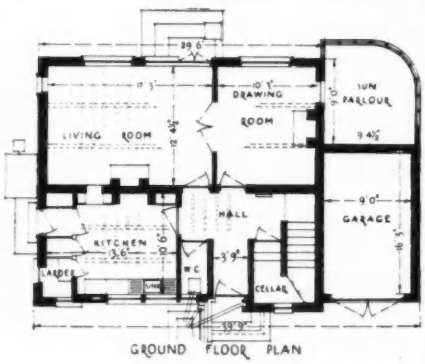
A TEN-ROOMED HOUSE BUILT FOR £1,368

FROM DESIGNS BY FREDERIC E. TOWNDROW

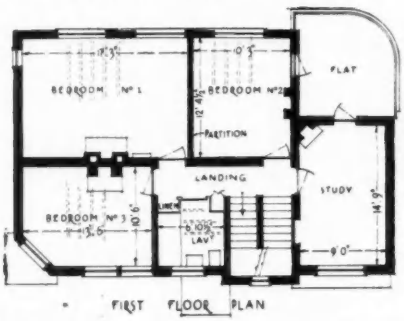
"FORSYTE," Hockley, Essex, represents a serious essay in the provision of certain stipulated accommodation at the absolute minimum of expenditure. It is claimed by the architect that its external form arose chiefly from this consideration, coupled with the determination to secure abundant light. It was arrived at only after detailed pricing of half-a-dozen different methods of construction, some of the variations being as follows :

	Price
For "Cellular" Fletton walls externally, cement slurry finish	£12 less
For 11-in. external cavity walls ($4\frac{1}{2}$-in. Fletton inside and $4\frac{1}{2}$-in. hard stocks seconds outside)	£30 extra
For 9-in. Fletton external walls, rendered $\frac{3}{4}$ in. ..	£5 extra
For hardwood floor to living room and drawing room	£10 10s. extra
For Flettons on edge (for coping) dipped in black composition instead of blue brick	£3 less
For dog-legged staircase with carriages and strings	

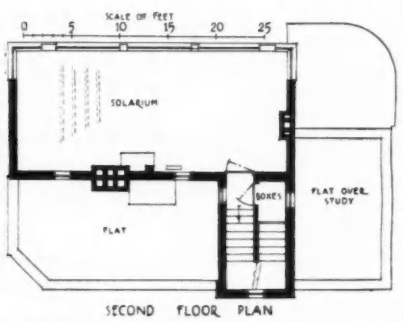
In the planning, the idea was to obtain the largest amount of accommodation on a small external area without costly breaks or projections. This, in its most logical form, gave a block almost square on plan—another important reason against a sloping roof. The splayed corner above the ground floor on the entrance frontage was arranged to give a distant view of the sea from the bedroom concerned. There is direct sunshine on the entrance side up to about 11.30 a.m.; from noon onwards the sun is on the garden side. The bathroom, kitchen and first-floor bedroom, therefore, reap the benefit.



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

and boxed up and plastered balustrade 2½ ins. thick, and with deal coping stained black and polished (instead of with newel wall) ..	No difference

Nine-inch solid walls of hard burnt stocks, in Portland cement, with ⅞-in. external rendering in the same cement, colour-washed, gave the best value for money. It was found that there would be so great a saving with flat roofs that an extra story could be built. Constructed of timber, the roof boarding is covered with three-ply bituminous felt, laid in boiling bitumen, with half-an-inch of shingle on the top. Eaves and gutters are dispensed with by draining to a shallow centre trough, falling towards either side of the building. The windows are standard metal casements, with wide frames; doors and other fittings are also of standard pattern.

A feature of the ground floor is the spacious reception room accommodation provided by the adjacent living- and drawing-rooms, connected by folding doors. On the first floor are three bedrooms, study, with opening to flat roof over sun-parlour, and tiled bathroom, fitted with a built-in marble-fronted bath, low pattern w.c. and pedestal basin. The large room on the top floor serves several purposes—child's playroom, billiards room and smoking room, as well as being available for dancing, since it has an oak floor.

The following are some of the cost figures :—

	£
Contract price (including external drainage, paths and gates)	1,273
Roofing contract	35
Electrical contract	30
Extras on fireplaces and special fittings	30
	£1,368

The back elevation, showing the sun parlour. Colour plays an important part in the external effect. The walls are coated with pale cream distemper, waterproofed with Russian tallow. The fascia to the top flat is painted blue-black to match the Staffordshire bricks and tiles : the copper kerb will give a line of green above this. Eaves soffits are brilliant enamel-yellow; steel windows and doors, a cheerful green; reveals to windows, sunshine yellow, a tone also extensively used internally.

["*Forsyte*," *Hockley, Essex. By Frederic E. Towndrow.*]

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

No New Charing Cross Bridge

THERE is to be no new Charing Cross Bridge. In reply to a question put to him by Col. Ashley last week, Mr. Morrison said he had caused the following letter to be addressed to the L.C.C. :

"I am directed by the Minister of Transport to refer to your letter of the 22nd July (E.2/43555), informing him of the decision taken by the London County Council at their meeting on the 22nd July that, subject to His Majesty's Government agreeing to contribute from time to time 75 per cent. of the actual ascertained expenditure on the Charing Cross Bridge scheme and on the scheme for the reconditioning of Waterloo Bridge, as recommended by the Royal Commission on Cross-River Traffic in London, and on the understanding that the net cost of carrying out the former scheme would not exceed £12,500,000, the Council would be prepared to promote a Bill in the next Session of Parliament for the construction of a road bridge at Charing Cross and the removal of Charing Cross Station to the south side of the river, in accordance with Scheme No. 6 recommended by the majority of the Advisory Committee presided over by Sir Leslie Scott, K.C.

2 : It is within the knowledge of the Council that at the time when the London County Council (Charing Cross Bridge) Bill, 1930, was rejected by the Select Committee of the House of Commons, the Minister caused an assurance to be conveyed to them that the Government would be prepared to support the Council should they decide to move the recommittal of the Bill. . . . .

3 : The Council are aware that the resources of the Road Fund are now insufficient to meet the heavy commitments undertaken in connection with schemes for the improvement and construction of roads and bridges in all parts of the country. . . . .

4 : Unfortunately, in spite of their thorough and arduous efforts, the Advisory Committee have been unable to submit a scheme which can be regarded as 'agreed.' The scheme recommended by the majority is, in fact, the subject of considerable controversy. Furthermore, on the question of the merits, the possibility cannot be ignored that future events such as a rapid development in the electrification of main line railways may profoundly affect the considerations which would determine the site of the railway station and the layout of the approaches on the south side of the river.

5 : The Government have most carefully reviewed the position in the light of all the circumstances of the case, including the present serious economic situation, and have authorized the Minister to convey to the Council their decision that it is not possible at the present time to renew the offer of a 75 per cent. grant from the Road Fund towards the cost of a new road bridge at Charing Cross."

Housing Progress

Mr. Simon asked the Minister of Health if he would state the number of houses completed during the nine months ended June 30 by local authorities and private enterprise, respectively, and the corresponding figure for the previous year.

Miss Susan Lawrence, who replied, gave the following figures :

Period	Completed by	
	Local Authorities	Private Enterprise
	*State-Assisted**	
9 months ended June 30, 1931 ..	43,968	1,384
9 months ended June 30, 1930 ..	35,279	1,164
	*Not State-Assisted**	
12 months ended March 31, 1931..	3,360	125,368
12 months ended March 31, 1930..	91,691†	

* Excluding houses with a rateable value exceeding £78 (£106 in Metropolitan Area). Returns related only to half-yearly periods ending March and September.

† Returns did not distinguish houses completed by local authorities from houses completed by private enterprise.

The figures shown above did not include houses erected by local authorities in replacement of houses demolished under improvement schemes.

THE SPECIFICATION WRITER

Modern Cathedral Lighting

WHEN considering the question of lighting a mediæval church it should be remembered that our forefathers' daily life was regulated by the sun, and that artificial illumination as understood today did not exist. Certain parts of a monastic church were dimly illuminated for the night offices, and on great festivals a wild and murky glare was provided by means of a multitude of pine torches, but these occasions not infrequently ended in a conflagration of the entire building.

The interior of a mediæval cathedral was designed to be seen by natural daylight, admitted partly through the aisle windows, but for the greater part through the clerestory windows of the nave and choir. The introduction of gas made it possible in Victorian days to hold services after dark. At Salisbury, to name one example, a long gas-pipe, with hundreds of naked burners, ran along both sides of the nave at triforium level, and these were solemnly lit by tapers from the triforium gallery. Generally a weird and wonderful assortment of Gothic Revivalist fittings were introduced at various points, and these have in many cathedrals gone through the three stages of evolution from fishtail burners, by way of incandescent mantles to electric light bulbs.

The adoption of floodlighting by electricity has revolutionized illumination, and made it possible to reproduce by artificial means the effect of daylight, for the sources of the electric light are concealed beside the windows of the clerestory. When the idea of floodlighting cathedrals and churches was first proposed certain ecclesiastically-minded bodies raised horrified hands that a method of illumination suitable to cinemas and theatres should be employed inside a sacred building.

> All our fathers have been Churchmen
> Nineteen hundred years or so,
> And to every fresh suggestion
> They have always answered "No."

The Oxford Diocesan Advisory Board published in 1929 a report on the lighting of churches, which was reactionary in outlook and condemned floodlighting as unsuitable for churches. Such documents often do more harm than good, showing a timidity of vision rather than a desire to explore the path of progress.

Fortunately the Chapters of several cathedrals have shown themselves more progressive than the members of the Oxford Board, and floodlighting has been successfully introduced into many churches, including famous cathedrals such as Peterborough, Durham and Southwell.

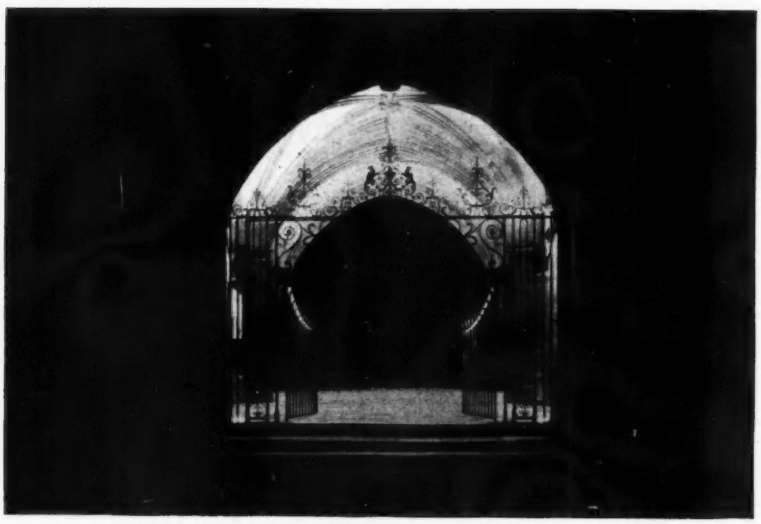
The advantage of providing light approximating to daylight is obvious. It prevents distortion of proportions and mouldings, the shadows fall naturally, and the eyes of the clergy and congregation are not irritated by glare from exposed fittings. A good over-all light of sufficient intensity is provided, and on this can be built up, if desired, any special high lights such as those thrown upon the pulpit, altar or choir stalls.

The pioneer installation was carried out at Peterborough. Early in 1924 the Dean and Chapter discussed the question of removing the inadequate gas illumination with the city electrical engineer, Mr. H. A. Nevill. After a series of experiments the work was carried out by the Edison-Swan Electric Company, and the present system was inaugurated in October, 1925.

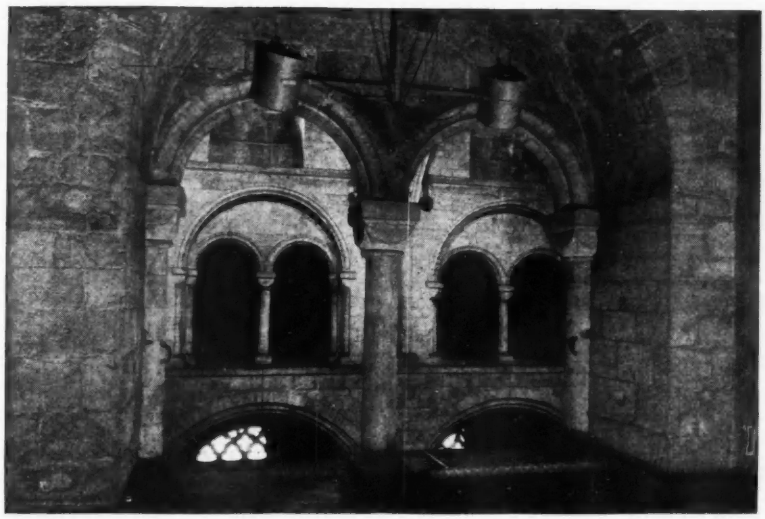
Peterborough Cathedral: the south aisle, by artificial light.

The light units are placed on each side of the clerestory windows and concealed in recesses which by daylight are in heavy shadow and almost completely conceal the lamps from sight. These lamps consist of specially-designed projectors, comprising three silvered glass mirrors mounted on a special case and equipped with a 250-watt lamp. The light beams are trained diagonally downwards so as to strike the floor approximately at the base of the piers on the opposite side of the nave. Part of the light which would be cut off by the edge of the clerestory wall and wasted is redirected upwards, and serves to illuminate the flat wooden cubing. At the crossing eight special units are mounted nearly one hundred feet above the floor, but all the fittings are so arranged that they can be cleaned and repaired from the upper galleries of the church without the need of scaffolding or ladders. The fittings themselves are painted to match the stonework and well camouflaged except that certain of the reflectors do catch the daylight, a defect which was remedied in the next installation carried out at Durham Cathedral.

In this famous church the principle first tried out at Peterborough is still further developed. Here the lighting is provided by means of eighty odd



Peterborough Cathedral: the west porch, by artificial light.



Durham Cathedral: flood units for lighting the choir from the triforium.

lighting units fixed in the clerestory and triforium. Each unit consists of a gas-filled projector lamp mounted in a case with silvered glass reflectors. These lights are so skilfully controlled that it is possible to read with ease small print at a distance of some fifty feet or so from the point where the light is installed.

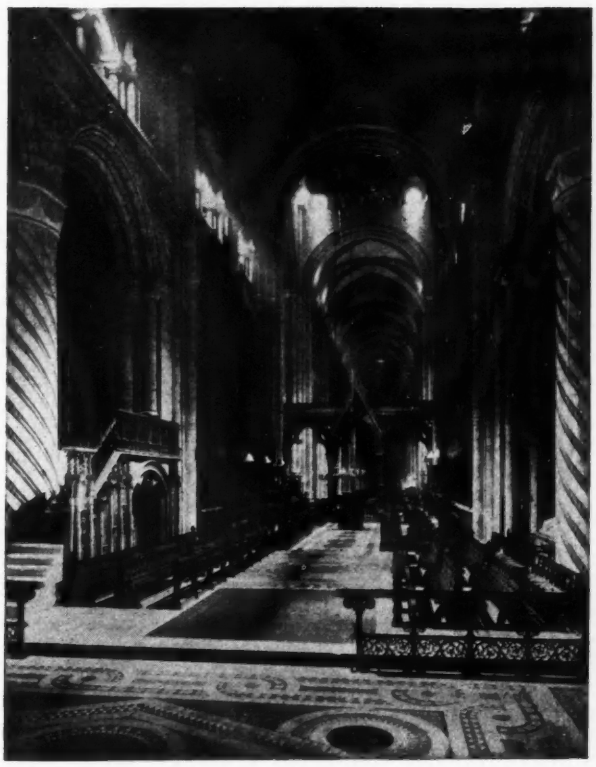
At Peterborough the whole building is illuminated with a gradual intensity of lighting, the highest being on or near the floor of the church, while the upper parts have a diffused light thrown upon them by means of reflectors. At Durham the cathedral architect, Mr. R. A. Cordingley, did not wish to have the upper levels and vaulting illuminated except from the natural reflection thrown back from the floor and pillars. Thus the clerestory and roof are at night shrouded in a dim mysterious gloom which is very impressive in this type of building. Another modification introduced at Durham is slightly to colour the floodlight by means of amber-tinted mirrors, a device which brings out the rich colouring of the stonework.

In both these cathedrals the aisles are sufficiently lit by the light spilled over from the nave and choir, which in direction and intensity resembles sunlight. A further ingenious piece of installation was placed in the west porch at Peterborough. Here the architect refused to allow any attachments to the walls or vault, and the light is provided by lamp holders sunk in the pavement.

Practically the whole of the controls in both cathedrals are located in the triforium, and these in turn are operated from buttons fixed at convenient points at floor level. At Durham these are concealed in the choir stalls, and are duplicated on both the north and south sides.

Southwell Cathedral lighting was carried out under the direction of Mr. W. R. Caroe, the cathedral architect, by the General Electric Company. The nave and tower are equipped with thirty-two 200-watt Osram lamps, concealed in a similar manner as at Durham and Peterborough, to give the effect of daylight. But here the aisles are lit by unconcealed lanterns, an effect which is less successful than that at Durham, where the spilled-over light has the effect of sunlight.

LL. E. W.



Durham Cathedral: the choir, looking east and west, respectively, by artificial light.

LITERATURE

CHURCHES AND CONVENTS OF RENAISSANCE ROME

IN this second volume in their "Scopas" series, Messrs. Tiranti complete the reprint of Paul Letarouilly's plates illustrating *Edifices de Rome Moderne*, by including in one book the whole of the drawings of ecclesiastical buildings.

The general index to this and the previous part, which appeared some months ago, is also included, together with Mr. Arthur Broadbent's translations of further selections from the *Renseignements Divers* which throw light on a variety of aspects on the subject. This part contains a table of linear measures of Renaissance and Classic Rome, also a chronological list of Popes from 1417 to 1831, and of the principal architects in Rome from the sixteenth to the early nineteenth century, as well as a list of the principal buildings of modern, as the successor of ancient, Rome down to the time of the nineteenth-century restoration of San Paolo fuori la mura.

The plates are alike valuable as monuments to the diligent draughtsmanship of a century ago, and as sources of inspiration to the student and practitioner of today. The variety of subjects within the category of ecclesiastical buildings, and the divers aspects from which they are approached, offer abundant material for experiment in relation to architectural problems and projects not necessarily ecclesiastical in character or purpose.

While many of the plans, sections and perspectives present a set of studies in general grouping and constructional detail of a particular architectural whole in its own setting, such as the Lateran palace and basilica, or the buildings of San Pietro in Montorio, there are also many smaller architectural accessories which are complete in themselves, such as fountains, tombs, holy water stoups, ambones, altars, balustrades, doors, well-heads, from which to derive inspiration for particular subjects. If details of mosaics and inlay, of capitals and pilasters, of floors, ceilings or entrances inevitably suggest, in these commercial days, their possible adaptation to banking, shipping or insurance purposes, rather than retaining an exclusively ecclesiastical quality, perhaps it is not unseemly, since it cannot be denied that Renaissance church buildings were in origin pagan and civil.

Among a hundred plates one may mention as an example of the complete single architectural object readily dissociated from its setting and capable of adaptation or reduction, the fountain at plate 232, probably the work of Fontana, and "one of the most picturesque of its kind." For sheer enjoyment of the drawings as depicting a phase of human life, plates 300 and 301, showing the harmonious simplicity of the Carthusian cloister, are particularly noteworthy.

The translator does not always seem entirely at home with his languages, but the meaning is generally made clear by the illustrations. On page xii the description of a pulpit as a "fine chair" is elucidated by reference back to plate 314, where the description remains in French as "*la chaire*." But such lapses are after all more or less trivial in the potpourri of tongues necessitated by an English edition of a French work on Italian architecture.

V. M. C.

Edifices de Rome Moderne. Par Paul Letarouilly. Volumes V and VI. London: John Tiranti & Co. Price 15s. net.

LES SCULPTEURS FRANÇAIS

ART, like civilization, generally decays when it resorts to excesses. It was an excess of ornament that caused the degradation of Byzantine art and reduced it to an unmeaning demonstration of facile technique.

From the fourth century, when Roman art reached bottom, ivories and stone sarcophagi were alike in their elaborated ornament. When Christian art succeeded, the dread of the idol served to keep the running on ornamental lines. In the sixth century, at Ravenna, ornament reached appalling

[*From* Edifices de Rome Moderne.

A view of the principal façade of the Basilica and Palace of St. Gio, in Laterano.

proportions and got seriously worse as Byzantium progressively prospered. The rigid figures of iconography ruled for centuries, together with the developments of the Roman excesses with regard to the Corinthian capital, treated comparatively in the fourth chapter of this book. Byzantium ruled for the next six hundred years, its influence being repelled only in Scandinavia, England and Ireland. Then architecture, good mother of the arts, stirred to new birth. Man in God's image and God's image in man asserted themselves, and one of the earliest results was the new sculpture as it appeared first in France—all over France. It was not a very vigorous child, but it was at least human instead of an ugly icon, for the Byzantine strangle-grip continued.

Romanesque architecture was the cradle of the new sculpture which grew up into the glorious strength of Gothic. Real figures of men and women appeared amidst the redundancy of floral ornament, and the absurdities of animal forms gave place to a better respect for the facts of Nature. Superstitions were bound to continue, but the rapidly increasing culture of the Church modified them and turned them into meaning symbolisms and often exalted narrative of religious story, and dignified it into fine teaching.

The title of this book tends to draw attention to the sculptors in the first place, but so much individualism could hardly be expected. The sculptors were rude men directed by the master minds of the architects employed by the ecclesiastics, so that, even if possible, a detailed study of the sculptors themselves was hardly worth while. A study of their works is very well worth while, if for no other reason than as an introduction to Gothic. It was a great and worthy introduction, and it was a struggle between life and death, to allow it its place as indicating the death of one great school and the birth of another.

Birth and death were very mixed in French twelfth-century sculpture. Confining herself largely to the capital, the tympanum and the figures of the piers, the author is generous in her descriptions and particular in their indications. With an admirably business-like faculty she gives a repertoire of 124 sites where this sculpture may be studied in France. Autun, Bayeux, Bourges, Cahors, Chartres, Cluny, Dijon, Le Mans, Moissac, Paris and Vézelay are obviously there; but there are things as important in a dozen other directions and of only lesser importance in still another hundred. To add to the practical value of the volume, Madame Lefrançois-Pillion provides a bibliography of sixty authors, all French with but six exceptions, these latter including the devoted R. K. Porter, in English, on the Romanesque sculpture of the pilgrimage roads.

The bibliography of the volume dealing with the sculptors of the thirteenth century is on a different plan. It enumerates the principal works with which the successive chapters deal, a considerable number in each case, so much has there been written on Gothic. The treatment is more general than that of the former volume, and the list of cathedrals has necessarily considerably increased. To the names of those given above, which are concerned with Romanesque particularly, must now be added Amiens, Laon, Reims, Rouen, Sens and Strasbourg. There are about eighty in all, the principal features of which are described, and the nature of Gothic, after the useful generalizations of the first chapter, is dealt with from all the points of view offered by so large a number of structures of importance. Some fresh plates have been added to this new edition of the volume on the thirteenth century, and the illustrations in the two volumes amount to seventy-five. The whole work is useful and practical. K. P.

Les Sculpteurs Français du XIIe Siècle.
Les Sculpteurs Français du XIIIe Siècle (new edition). Par Louise Lefrançois-Pillion. Paris: Librarie Plon. 1931. Cr. 8vo, sewn. Francs 25 each volume.

BUILDING SOCIETIES' YEAR-BOOK

THE Minister of Health (the Rt. Hon. Arthur Greenwood, M.P.), in the course of a foreword to this year's edition of *The Building Societies' Year Book*, voices his grateful appreciation of the valuable contribution building societies have made towards the solution of the country's post-war housing problems. Good health, he emphasizes, is intimately connected with good housing conditions, and it would be misleading to suggest that anything like enough accommodation has yet been provided for the lowest-paid workers. Until this is remedied, no one can say that the need for houses has been met. Private enterprise can only build houses so long as a market for the houses built is available, and it is not overstating the case, he thinks, to say that the market for small houses built for sale has been created by, and depends for its continuance upon, the assistance available to purchasers from the building societies.

The *Year Book* is the official handbook of the National Association of Building Societies, of which the 340 principal building societies are members, representing about 96 per cent. of the total assets of the building societies of Great Britain. An alphabetical and geographical list of these societies, the principal figures in their last balance sheets, and the names of the directors and managers, are published in the book, together with a mass of useful information indispensable to all who are interested in this remarkable social and industrial movement.

An interesting feature of the book is the section containing a series of articles written by experts, including Mr. Hartley Withers, Sir James B. Baillie (Vice-Chancellor of Leeds University), and Sir John Stewart Wallace, who writes on Land Registration.

The President of the Association, Viscount Cecil of Chelwood, in the course of his speech at the annual conference at Edinburgh, a full report of which is contained in another section of the book, refers to the suggested taxation of land values, emphasizing that as building societies represent some millions of the population they have a right to be heard on the subject and should insist that nothing should be done to increase the cost of building houses, particularly for the working classes.

Building Societies' Year Book, 1931. Compiled and Edited by George E. Franey, O.B.E. London: Reed & Co. Price 7s. 6d. net.

ELECTRICITY FOR EVERYBODY

MR. BORLASE MATTHEWS has completely rewritten and remodelled his electrical encyclopædia, a work which first appeared in 1908. The book is a work of reference which gives reliable and comprehensive information on the various practical uses of electricity. Much thought has been given to arrangement of the contents, and the several sections are subdivided in a logical and useful way. Each division (e.g. the home, factories, public buildings, etc.) is divided into five sections: lighting, cooking, water-heating, heating, power; and each of these sections has subsections dealing respectively with advantages, cost, accomplishment, wiring and necessary apparatus. The system necessitates a certain amount of repetition, but this is excusable in a work of reference, because of the added convenience, when referring quickly to any particular subject, of finding every aspect considered without looking elsewhere. The style is very simple, and minute details enable even an untechnical mind to understand the methods and suggestions described.

It would be hard indeed not to become infected with enthusiasm for electricity after acquainting oneself with the myriad activities of this versatile force, described here; no Victorian "Miss" ever had a list of accomplishments so enormously long and varied (see "accomplishments" in each section). The most valuable and interesting sections to the architect, and probably also to the general reader, are those dealing with wiring and with lighting; the tables and schedules throughout the book have been well drawn up,

and provide rapid access to the most diverse information. Practical and technical points have been dealt with most thoroughly and particulars of standard lighting practice are given for every possible case. Since this is usually of the conventional kind, the architect will seek æsthetic inspiration elsewhere, and be buoyed up by the belief expressed in the section "Lighting in the Home" that "the common arrangement nowadays is for architects to suggest lighting fittings just as they have always suggested fireplaces, and the range of fittings is so large that anything can be purchased in keeping, say, with an Adams fireplace or Jacobean furniture!"

A useful directory of towns gives the names of the electrical supply undertakings, electrical contractors and pressures of supply.

C. H. W.

Electricity for Everybody—Handbook for 1931. By R. Borlase Matthews. London: Electrical Press, Ltd. Price 5s. net.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council:

British Architects' Conference, Dublin: The Council passed a cordial vote of thanks to the members of the Royal Institute of the Architects of Ireland and all those who contributed to the success of the conference at Dublin.

Examination for the R.I.B.A. Diploma in Town Planning: On the recommendation of the Board, Mr. W. B. Oldacre was awarded the R.I.B.A. Diploma in Town Planning.

The School of Architecture, Auckland University College, New Zealand: On the recommendation of the Board it was decided—1: That the three years' full-time day course be recognized for exemption from the R.I.B.A. Intermediate Examination; 2: That the five years' course leading to the degree of Bachelor of Architecture be recognized for exemption from the R.I.B.A. Final Examination.

Prizes. Proposed Programmes for Tours: The Board reported that they had approved the programmes suggested by the following:

Miss K. A. Veitch (Owen Jones Student, 1930), and Messrs. K. H. Read (Henry Saxon Snell Prizeman, 1930), A. C. Collins (Tite Prizeman, 1930), G. H. While (Pugin Student, 1931), B. B. Lewis (Victory Scholar, 1931), and H. Jackson (Henry Saxon Snell Prizeman, 1931).

The Hunt Bursary, 1930: The Board reported that they had approved the report on "Norman Town Planning in Wales" submitted as the result of his tour by Mr. T. M. Daniel, A.R.I.B.A.

The Godwin and Wimperis Bursary, 1929: The Board reported that they had approved the report on "The Standard of Musical Tone from an acoustic analysis of good Concert Halls, Opera Houses and Churches" submitted as the result of his tour by Mr. Hope Bagenal, A.R.I.B.A.

The Soane Medallion, 1930: The Board reported that they had approved the drawings and sketches prepared as the result of his tour by Mr. J. L. Martin.

Admission to the Final Stages of three Competitions: It was decided that competitors awarded certificates of Hon. Mention in the competitions for the Tite Prize, Soane Medallion and Victory Scholarship be admitted, if they so desire and provided that they are eligible in other respects, in the year next following only, direct to the final stages of the respective competitions.

Reports prepared on their Tours by R.I.B.A. Prize Winners: It was decided that it be a regulation that prize winners must submit their reports within six months after the date of the conclusion of their tours.

Constitution of the Board of Architectural Education: It was decided to invite the Royal College of Art to nominate a representative to serve on the Board of Architectural Education.

Architectural Competitions: The Position and Duties of Assessors: On the recommendation of the Practice Standing and Competitions Committees it was decided to make certain amendments to the Regulations for the Conduct of Architectural Competitions, in regard to the position of assessors. These proposed amendments have been published in the *R.I.B.A. Journal* for the comments and criticisms of members. The following clauses proposed by the Practice Standing and Competitions Committees were approved for inclusion in the "Directions to Assessors."

New Clause 10. An Assessor must not act as consulting architect unless he has been appointed as such before the inception of the competition, nor in any other professional capacity in any matter connected with the work which has been the subject of the competition, provided always that he may act as arbitrator in any dispute between the promoters and the selected architect. If, under the special conditions referred to above, the assessor is acting as consulting architect, it should be clearly stated in the published conditions of the competition.

New Clause 11. If an architect is officially approached by the promoters for advice as to the holding of a competition with a view to his acting as assessor, and eventually it is decided not to hold a competition but to appoint an architect to carry out the work, the architect originally approached in an advisory capacity is precluded from acting as architect for the work in question.

New Clause 12. Assessors are urged to ensure that whenever possible competitions should be thrown open not only to architects established in private practice, but to all members of the R.I.B.A.

Addition to Clause 7. Assessors are urged to take all possible steps to ensure that the award is communicated to the competitors before it is announced in the Press.

On the recommendation of the Practice Standing and Competitions Committees, Clause 9 of the Code of Professional Practice was revised as follows:

Clause 9. An architect must not act as architect or joint architect for a work which is or has been the subject of a competition in which he is or has been engaged as assessor.

An assessor must not act as consulting architect, unless he has been appointed as such before the inception of the competition, nor in any other professional capacity in any matter connected with the work which has been the subject of the competition, provided always that he may act as arbitrator in any dispute between the promoters and the selected architect.

If the architect is officially approached by the promoters for advice as to the holding of a competition with a view to his acting as assessor, and eventually it is decided not to hold a competition but to appoint an architect to carry out the work, the architect originally approached in an advisory capacity is precluded from acting as architect for the work in question.

Award of the R.I.B.A. Ulster Architecture Medal for the year 1930: On the recommendation of the Jury for the Award of the R.I.B.A. Ulster Architecture Medal for the year 1930, it was resolved that the medal be awarded to Mr. R. S. Wilshere, A.R.I.B.A., Education Office, Belfast, for the Strandtown P.E. School, North Road, Belfast, and that the following buildings be commended: The Carryduff Church Hall, Carryduff, Co. Down, the work of Mr. John MacGeagh, A.R.I.B.A., and the Heyn Memorial Hall, St. Mark's, Dundela, Belfast, the work of Messrs. Henry Seaver, B.E., and R. H. Gibson, F.R.I.B.A. (Associated).

The British Engineering Standards Association: The following members were appointed to represent the R.I.B.A. on the newly-formed Building Divisional Council of the B.E.S.A.: Messrs. W. E. Vernon Crompton, J. Ernest Franck, Percival M. Fraser, and Alan E. Munby.

The 1931 Form of Contract: A memorandum containing suggestions for the guidance of members in dealing with the new Form of Contract was approved for publication in the *Journal*.

The Fellowship: The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925: Mr. Donald MacGillivray, President of the Institute of Southern Rhodesian Architects.

Reinstatement: The following ex-member was reinstated: As Associate: Mr. J. J. Cresswell (Grimsby).

Election of Students: The following Probationers were elected as Students of the R.I.B.A.:

Gordon, Miss I. M. (Robert Gordon's Colleges, Aberdeen); Messrs. Kendall, W. (Architectural Association), Lay, G. Q. (London University),

Richards, G. D. L. (Welsh School of Architecture), Sharkey, E. P. (Robert Gordon's Colleges, Aberdeen), Sydney, P. A. (Liverpool School of Architecture), Thomson, W. K. (Liverpool School of Architecture), Tripe, A. C. (Architectural Association), Wright, J. P. M. (Robert Gordon's Colleges, Aberdeen).

HANTS AND I.O.W. EXHIBITION

Mr. Ingalton Sanders, F.R.I.B.A., presiding at the annual exhibition of students' prize drawings in connection with the R.I.B.A., and of work by members of the Hants and Isle of Wight Architectural Association, held at the Winchester School of Art, remarked that the architect's duties did not end merely with the design of new buildings, for he met with a fresh series of problems when he was called in to advise as to alterations and restorations of old buildings, in such cases requiring knowledge as to dilapidations, the law of light, questions as to easements, and other problems. To obtain the knowledge required for his numerous functions an intensive architectural education was necessary through many years of close study.

Mr. Sydney D. Kitson, Hon. Secretary of the R.I.B.A., who formally opened the exhibition, then delivered an address on "The trend of architectural taste."

Mr. Kitson said that an architect was bound more than any other artist to work in the current taste of his day. His livelihood depended upon it. It seemed to him that never, since the early days of the Renaissance in Italy, was there a more difficult and a more thrilling time for the young architect. Older men, brought up amid a sequence of revivals, followed the fashion of the day; and if they were men of ability (as so many of them were), they produced work which was often better than their models. But they lived on to see the revival which they had mastered displaced by another whose language they had to learn and whose significance they only half believed in. The young architect today would have the task and the opportunity of moulding the vital and elemental ideas which have been thrown up in recent years like lava from a volcano, into a living style of architecture. A modern school of thought, which flourished more abroad than in England, would have us rely only on functionalism; they would mechanize the most human of the arts, and they would use solely newly-invented materials — however crude and however hideous — solely because they were new. The study of history supported the belief that architecture could not be bounded by such narrow limits, but rather that it was the chronicle of the spiritual and economic forces of the time.

Another school of thought would have us follow traditions and draw from the buildings of the past all the inspiration which was required in designing the buildings of the present. It seemed to him that this school failed to take into account the fundamental, economic and political changes which were taking place at the present time.

THE WELSH SCHOOL OF ARCHITECTURE

The following awards have been made as a result of the sessional examinations at the Welsh School of Architecture at the Technical College, Cardiff.

Professors L. B. Budden, M.A., F.R.I.B.A., and A. C. Dickie, M.A., A.R.I.B.A., were the external examiners.

Fifth Examination for the Diploma awarded at the end of the five years' full-time course, exempting from the R.I.B.A. Final Examination: Messrs. J. P. Ward, Diploma (with distinction); C. Rosser, Diploma; W. H. Maton, Diploma; J. Lewis, Diploma; and C. L. Bugler, Diploma.

Fourth Examination: Messrs. N. D. Ayres, J. T. Darch, W. J. Davies, and G. D. Ll. Richards.

Third Examination for the Certificate awarded at the end of three years' full-time course, exempting from the R.I.B.A. Intermediate Examination: Messrs. F. G. Allen, H. J. W. Lewis (with distinction), S. G. Roberts, C. W. Williams, C. J. Fussell, and Miss M. Murray.

Second Examination: Messrs. C. H. Francis, and D. W. Roberts, T. Hill, L. F. Hurley, R. G. Peacock, A. S. Thomas.

First Examination: J. R. Shedden.

C.P.R.E. BRANCH FOR HEREFORDSHIRE

One of the most representative and important county meetings held in Hereford for some years took place at the Shirehall recently, when steps were definitely taken to form a county branch of the Council for the Preservation of Rural England.

Sir John Cotterell, Bt., Lord Lieutenant of Herefordshire, presided, and he was supported by the Earl of Crawford and Balcarres, K.T., President of the C.P.R.E., the Bishop of Hereford (Dr. C. Lisle Carr), Alderman F. Ballard, Chairman of the County Council, the Mayor of Hereford, Professor Patrick Abercrombie and Mr. G. H. Jack, the County Surveyor and Architect of Herefordshire.

The following message from the Minister of Health (Mr. Arthur Greenwood), was read:

I am very pleased to learn that steps are being taken to form a Branch of the Council for the Preservation of Rural England for the county of Hereford. Lovers of the countryside need no convincing that measures require to be taken for preserving its beauties and amenities. The Town and Country Planning Bill, which it is the intention to pass into law this session, will give additional powers to local authorities for this purpose. In order that this measure may produce good fruit, and for other reasons, it is necessary that a wide and instructed interest in rural preservation should be cultivated, and I wish the C.P.R.E. every success in its efforts in the beautiful county of Hereford.

Sir John Cotterell, proposing the formation of a branch of the C.P.R.E., laid stress upon the unspoilt beauty of the county.

[*From* The Modern Shop.

A photograph of a model shopping village in the wealthy residential quarter of Dallas, Texas, U.S.A. As will be noted, special facilities are provided for the parking of cars in the shopping area.

Lord Crawford urged the desirability of using local materials wherever possible in local building, since Hereford and the border counties had, in the very colour and constitution of the earth, the elements desirable in maintaining the beauty of the West Country.

The Bishop of Hereford urged upon incumbents the necessity for regarding this question of preservation of rural amenities as one of their duties.

A resolution to form a branch was passed unanimously, and a provisional sub-committee was formed to make the necessary arrangements to bring it into being without delay.

INSTITUTION OF STRUCTURAL ENGINEERS

Following are the names of the successful candidates in the Graduateship and Associate-Membership examinations of the Institution of Structural Engineers :

Graduateship Examination : Messrs. H. H. Apcar, V. A. Burrows, L. Bustami, L. A. J. Dyke, G. W. Edwards, J. H. Gandhi, E. G. Judge, F. D. Russell.

Associate-Membership Examination : Messrs. J. N. Aggarwal, S. Agnew, T. Bedford, A. Dunsmore, E. N. Browne, C. E. Fonseka, F. N. Grose, J. W. Harkin, T. Holmshaw, D. W. Hughes, H. C. Jones, E. G. Judge, C. B. McIntosh, N. N. Mehta, C. J. Morreau, G. Newell, H. Newell, S. Richards, H. Ross, M. Sharif, W. J. Storey, T. J. Tonge, E. N. Underwood, C. R. Wallace, G. Wheeler, G. G. Watkins.

ANCIENT BUILDINGS OF TODAY

Mr. A. R. Powys, speaking at a weekly luncheon of the Norwich Rotary Club, on " The Value of Ancient Buildings in these days," said in considering the value of old buildings today one could not separate them from the past, one did not, probably, admire them because they were old, but because they were the good work of good human beings in a period.

One of the important contributions which old buildings made to us in our day was that from them we learned, when we set about building on our own account, that the way to achieve this beauty and nobility was to do like those men did and not consciously survey the past and make suggestions as to the future. People who instead of repairing old work had attempted to give to new what was thought the necessary quality that people in the past had given it, made a big mistake. One could not do that in architecture any more than in business. Another folly was in trying to be modern; one did not make normal use of up-to-dateness in the ordinary sense by outstepping to catch something springing out of the future and presenting it in the present.

If one contemplated the beauty that existed in some tree which had grown in perfect conditions to unusual girth and height and great spread of its limbs, one would find that the beauty was nothing but normal to its kind. We were more kin to the natural things on the earth, and to live normally in the method of the time according to one's kin was the way in which to bring beauty into this world. Searching for beauty *via* theories so often brought with it disaster.

LAW REPORTS

WHAT IS A LINE OF BUILDINGS ?

Molins Machine Co. v. *L.C.C.—King's Bench Divisional Court—Before Justices Swift and Charles*

THE case of Molins Machine Co. *v.* L.C.C., which came before the Court was an appeal by the L.C.C. under the London Building Act, 1930, sec. 25.

Mr. Montgomery, K.C., for the appellants, said the appeal raised a question of some importance, having reference to the general building line to be defined on the south-western side of Crook Road, Deptford. The L.C.C. now appealed from a decision of the Appeal Tribunal under the Act. The main question was whether the Appeal Tribunal were right in fixing a building line differing from that fixed by the superintending architect of the L.C.C. The superintending architect took a line from the houses in adjoining property. The Appeal Tribunal took a line formed by a lodge, a small building, and the boundary wall between them, which was in front of the main buildings on the property and, in fact, came right up to the street.

Counsel contended that this street should have been treated as one street, and not divided into two parts as had been done, and he asked the Court to restore the superintending architect's certificate.

Mr. Cresswell, for the respondents, Molins, Ltd., contended that the tribunal came to a right conclusion.

JUDGMENT

Mr. Justice Swift, in giving judgment, said the Molins Co., desiring to build in Crook Road, applied to the L.C.C., and the superintending architect inspected the *locus* and gave a certificate defining the general line of building. He looked at the whole of the road from the railway bridge to the bend of the road. He determined the general line of buildings in August, 1930, and stated that the general line of buildings was the frontage of seven out of the nine buildings and not the frontage of the two out of the nine. The Molins Co. appealed to the Tribunal of Appeal, who also viewed the *locus* and came to a conclusion of fact that it was unnecessary and inconvenient to define a general line of buildings longer than the line between certain points and the line of the wall. The tribunal were not entitled to come to that determination.

His lordship did not think that the tribunal had any right to take into consideration the existence of the wall or the boundary or fence, which was not in itself a building. They were wrong in considering that this wall would enable them to fix a building line. They were bound to take the existing buildings, and look at them as a whole. The point at issue was a question of fact, and it was inconvenient and unnecessary to divide Crook Road into two parts. It should have been dealt with as one whole street, and there was no evidence justifying its separation into two parts as the tribunal had done. The tribunal came to a wrong conclusion in fact, and had no business to consider the boundary wall in determining what the building line was, and there was no evidence upon which they could fix the building line as they had. Their certificate would be set aside and the superintending architect's certificate restored.

Mr. Justice Charles agreed. The appeal was allowed with costs, and the tribunal's certificate set aside and the superintending architect's certificate restored.

ARCHITECT'S FEES

Shipwright v. *Lidiard. House of Lords. Before Viscount Dunedin, and Lords Warrington, Atkin, Tomlin and Macmillan*

This was an appeal by Mr. W. G. Shipwright, an architect, against a decision of the Court of Appeal.

Originally the case was tried by an Official Referee of the High Court, the plaintiff claiming from the defendant, Sir Herbert Lidiard, a building owner, £1,537 odd for fees as remuneration in respect of a scheme for the erection of eighty-four houses, twelve shops and twenty-one flats, on an estate at Woking, of which the plaintiff was appointed surveyor and architect. Twelve houses were at first erected, and the plaintiff recommended the use of aerocrete. Later, cracks appeared in the walls and chimney breasts, and thereupon the defendant discontinued the scheme and terminated the employ of the plaintiff, and defendant contended that the sum he had paid plaintiff, £279 odd, covered payment for the services he had rendered.

After a long hearing the Official Referee came to the conclusion that the defendant was justified in determining the plaintiff's employ, and he found that the plaintiff was guilty of negligence in specifying unsuitable material.

The plaintiff appealed to a King's

Bench Divisional Court, and Justices Talbot and Finlay reversed that decision, finding that the negligence found by the Official Referee was not open to the defendant in his pleadings.

The defendant thereupon appealed to the Court of Appeal, who restored the finding of the Official Referee.

Plaintiff now appealed.

Their lordships dismissed the plaintiff's appeal, holding that aerocrete was a material not unsuitable in itself if properly matured, but that it was impossible to tell if it was matured by mere inspection, needing to be kept under observation to see if it would shrink and develop cracks. They further found that the plaintiff knew nothing of this limitation in its use, and took no precaution, and that under these circumstances, the defendant was justified in feeling he had lost confidence in plaintiff, and to put an end to the contract.

ANCIENT LIGHTS DISPUTE

Collins v. *Giles. Chancery Division. Before Mr. Justice Maugham*

This was an action by Mr. A. E. Collins and Mr. F. Collins, of Butts Lawn, Brockenhurst, Hants, against the trustees of the Brockenhurst Nursing Association, claiming damages for the alleged obstruction of ancient lights, caused by a bungalow erected by the defendants.

Plaintiffs' case was that for a period of many years their property, Nos. 1, 2 and 3 Butts Lawn, had enjoyed full and uninterrupted access of light over the gardens of Nos. 4 and 5. These two houses had been demolished, and the defendants had erected the bungalow complained of, in spite of protests from the plaintiffs, with the result that the light coming to plaintiffs' house had been seriously diminished, and rendered it less comfortable for habitation. Plaintiffs also said the value of their property had been depreciated.

Defendants denied that there was an actionable nuisance, and pleaded that as the five houses formerly belonged to one owner there had been such unity of ownership as to destroy the prescriptive right to ancient lights.

Mr. P. J. Waldram, daylight illumination expert, and Mr. W. J. Green, architect and surveyor, of Southampton, were called on behalf of the plaintiffs, and Mr. A. Stewart, architect, of Southampton, and Mr. J. Swarbrick, F.R.I.B.A., of Maddox Street, W., for the defendants.

His lordship came to the conclusion that No. 2 Butts Lawn possessed an easement of light, but that the bungalow only interfered with it to a small extent, and he therefore awarded plaintiffs nominal damages of forty shillings. No legal obstruction had been established in regard to No. 3. With regard to No. 1, he was satisfied there was a considerable diminution of light to the ground-floor window due to the bungalow, and he awarded £60 damages in regard to it. He gave the plaintiffs the costs of the action except in so far as they were increased by the claim made for No. 3.

COMPETITIONS OPEN

August 27.—Sending-in day. Proposed all-Scottish House for the Ideal Home Exhibition. Limited to architects practising in Scotland or of Scottish birth. Assessor: John Watson, A.R.S.A., F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from *The Daily Mail*.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors: Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175, and £100. Conditions, etc., were obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius from Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, AUGUST 5

ROYAL SOCIETY OF ARTS INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of some of the designs submitted in the above competition, including architectural decoration, textiles, furniture, book production and advertising. Until August 31. 10 a.m. to 5 p.m. (Sundays, 2.30 to 6 p.m.) 10 a.m.

SATURDAY, AUGUST 8

Sunrise, 5.33 a.m. Sunset, 8.38 p.m.

FRIDAY, AUGUST 14

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, Bloomsbury, W.C.1. Last day for submission of photographs for the Society's Annual Exhibition.

SATURDAY, AUGUST 15

Sunrise, 5.44 a.m. Sunset, 8.24 p.m.

MONDAY, AUGUST 17

Closing date of THE ARCHITECTS' JOURNAL August Holiday Sketches Competition.

SATURDAY, AUGUST 22

Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

SATURDAY, AUGUST 29

Sunrise, 6.5 a.m. Sunset, 7.55 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1

INTERNATIONAL ILLUMINATION CONGRESS. London, Glasgow, Edinburgh, Sheffield, Buxton, Birmingham and Cambridge. Until September 19.

FRIDAY, SEPTEMBER 4

INTERNATIONAL ILLUMINATION CONGRESS. At Glasgow. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Organization for the Development of Electric Lighting," by C. A. Atherton; "Progress and Teaching of Illumination in Italy," by C. Clerici; "Lighting Progress in South America," by A. M. Baidaff. Section 3: "The Provision of Adequate Daylight in Building Regulations," by P. J. Waldram; "Daylight Illumination and Town Planning," by C. G. Möller; "Visual Performance at Various Levels of Daylight Illumination," by K. Y. Yang; "Daylight Illumination of Art Galleries with Overhead Lighting," by T. Hirayama. Afternoon Session, 2.30 p.m. Section 1: "Home Lighting," by C. Haslett and N. E. Miller. Section 3: "Photo-Electric Measurements of Daylight Illumination by the Use of a Model Room," by Z. Yamauti and K. Hisano; "Mathematical and Graphical Determination of Direct Daylight Factors," by A. C. Stevenson; "Prediction of Natural Illumination in Interiors and on Walls of Buildings," by H. H. Higbie and A. D. Moore. 10 a.m.

SATURDAY, SEPTEMBER 5

Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7

SANITARY INSPECTORS' ASSOCIATION, 27 Moreton Street, S.W.1. Annual Conference. Bridlington. Until September 12.

INTERNATIONAL ILLUMINATION CONGRESS. At Edinburgh. Following are some of the papers to be read. Morning Session, 9.30 a.m. Section 1: "The Lighting of Seaside Resorts," by A. P. Allan and J. M. Campbell; "Mason Experiments in Street Lighting," by W. S. Stiles; "Modern Public Lighting by Electricity," by W. J. Jeffery. Afternoon Session, 2 p.m. Section 1: "The British Standard Specification for Street Lighting," by C. C. Paterson. 10 a.m.

THURSDAY, SEPTEMBER 10

INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2: "Architectural Lighting," by L. Kalff; "Engineering Aspects of Architectural Lighting," by W. J. Jones. 10 a.m.

FRIDAY, SEPTEMBER 11

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. 10 a.m.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

THURSDAY, SEPTEMBER 17

Closing date of THE ARCHITECTS' JOURNAL September Holiday Sketches Competition.

FRIDAY, SEPTEMBER 18

NATIONAL SMOKE ABATEMENT SOCIETY, 23 King Street, Manchester. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19

Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

TRADE NOTES

Cast Concrete Products Association

The annual meeting of the Cast Concrete Products Association is now looked upon by members as one of the most important functions of the year, as a programme progressive in interest and variety is always provided. The scientific aspect of the industry predominated at the 1930 meeting, whilst on this occasion an enjoyable and educational day was spent on July 10 as the guests of the Cement Marketing Co., Ltd.

Over sixty members journeyed from all parts of the British Isles to join Mr. Harold Anderson, the chairman of the Cement Marketing Co., Ltd., on the steamer *Viscountess*, in which the journey to the Kent Portland cement works of the Associated Portland Cement Manufacturers, Ltd., was made.

At a luncheon on board, Mr. H. W. Jenks, the chairman of the C.C.P.A., after thanking Mr. Anderson and the Cement Marketing Co. for entertaining them, said that they all realized, of course, that they could not make good products without reliable cement, and this the Cement Marketing Co., Ltd., had been unfailing in its efforts to provide.

Mr. Anderson, in reply, said, as chairman of the Cement Marketing Co., he welcomed the Association and congratulated them on the way they were developing their industry, pointing out that by united efforts they would be able to accomplish far more than they could individually.

On disembarking, the members examined the attractive exhibition of concrete products and cast stone grouped round the pavilion in which the annual meeting was to be held.

The Association's Annual Meeting

The chairman, Mr. H. W. Jenks, at the annual general meeting, referred to the considerable progress which had been made by the Association, and thanked the Council for their unstinted support during his year of office.

In submitting the Council's report, he said the period under review had been one of unequalled trade depression. That had not, however, reacted so severely on the precast concrete products industry, since they were able to meet the demands of the building trades and municipal requirements with the most economical units. Mr. Jenks then drew the members' attention to the following subjects: Standardization of building materials; concrete partition slabs; fire resistance; the various industries (silicosis) scheme, and kerbs.

The meeting then proceeded to elect the new Council, four additional names being nominated. On a ballot being taken, the old Council was re-elected, Mr. D. H. Stent, A.M.INST.C.E., taking the place of Mr. G. W. Butchard, who had asked to be relieved from office. Messrs. Crewdson, Youatt and Howard were elected auditors, and a vote of thanks to the chairman terminated the meeting.

The members then divided into parties and, accompanied by guides, examined all the stages of cement manufacture.

*

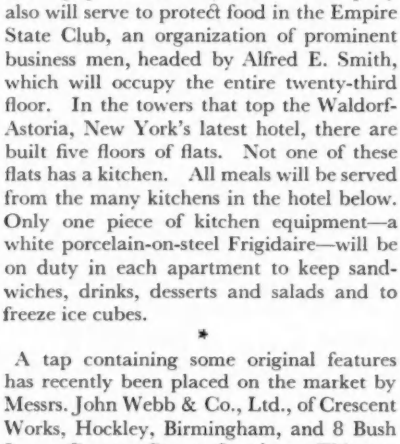
Messrs. Lumbys, Ltd., Greetland Boiler Works, Halifax, have issued a new catalogue of their various specialities. These include the "Solar" sectional boilers, which the firm claim may be placed on wood floors without danger, and which are of types suitable for low-pressure steam heating, central heating and/or hot-water supply. A big range of other types of boilers is included, suitable for every conceivable purpose. Among other specialities are the "Solar Darce" radiators. The firm are contractors to the Admiralty, Air Ministry, War Office, H.M. Office of Works, India Office, Crown Agents for the Colonies, London County Council, Ministry of Health, etc. Among the awards secured by the firm at exhibitions were the Grand Prix, Brussels, 1897; gold and silver medals, Paris Exhibition, 1878–9; and gold medal, Paris, 1900.

*

In connection with the world's tallest structure, the Empire State Building, New York, which will rise to a height of 1,280 ft., and have a dirigible mooring mast, a contract has been signed with Frigidaire to make available for the 25,000 tenants, unit-type coolers which will provide water at the proper temperature at any time of the day or night. Advanced electric refrigeration equipment built by the same company also will serve to protect food in the Empire State Club, an organization of prominent business men, headed by Alfred E. Smith, which will occupy the entire twenty-third floor. In the towers that top the Waldorf-Astoria, New York's latest hotel, there are built five floors of flats. Not one of these flats has a kitchen. All meals will be served from the many kitchens in the hotel below. Only one piece of kitchen equipment—a white porcelain-on-steel Frigidaire—will be on duty in each apartment to keep sandwiches, drinks, desserts and salads and to freeze ice cubes.

*

A tap containing some original features has recently been placed on the market by Messrs. John Webb & Co., Ltd., of Crescent Works, Hockley, Birmingham, and 8 Bush Lane, Cannon Street, London. This tap is patented and registered under the name of "Aquatite" and is guaranteed by the company to be absolutely dripless. Any tap returned to them within seven years from the date of purchase and found to be faulty will be replaced free of charge.



Section of Aquatite (pat.) dripless tap.

The sectional drawing reproduced on this page shows the new principle with double action and encased seating. The tap is suitable for hot or cold water of high or low pressure, each cock being tested to 300 lb. per square inch. Models for all purposes are available and may be finished in brass, nickel, or chromium plating.

The firm's booklet is attractively produced, the illustrations being particularly cleverly printed. Copies are available on request to either of the addresses given above.

NEW WHITGIFT GRAMMAR SCHOOL

Following are the names of the general contractors, specialists and some of the sub-contractors for the new Whitgift Grammar School, illustrated and described on pages 171-174 of this issue. General contractors, E. H. Smith & Co., Ltd., who were also responsible for the excavation, foundations, dampcourses, plumbing, iron staircases, joinery and plaster. Consulting engineer for structural work, foundations, etc., J. F. Farquharson, M.I.STRUCT.E. Clerk of Works, F. J. Pitt. General foreman, F. Baddiley. Sub-contractors: Val de Travers Asphalte Paving Co., Ltd., asphalt; Reinforced Concrete, Ltd., reinforced concrete; Ames and Finnis, bricks and tiles; Metropolitan Stone Co., Ltd., Monk's Park stone; E. Wood, Ltd., structural steel; "T.W.F." Roofing Felt Co., roofing felt; Wotton and Sons, patent glazing; Stoner and Saunders, cast lead; Stevens and Adams, Ltd., oak and maple wood-block flooring; Walters, Ltd., jointless floors; R.I.W. Products, Ltd., waterproofing materials; G. N. Haden and Sons, Ltd., central heating, boilers and ventilation; Southwell Marriage & Co., Ltd., grates and sanitary fittings; Croydon Gas Co., gas fittings; C. Harvey & Co., electric wiring and electric light fixtures; Diespeker & Co., Ltd., precast stairs and shower bath partitions; James Gibbons, Ltd., door furniture; W. James & Co., Ltd., casements and window furniture; Gillett and Johnson, Ltd., turret and clocks; A. L. Gibson & Co., Ltd., gymnasium rolling shutters; Campbell Bros., Ltd., decorative painting to Great Hall; John Daymond and Son, Ltd., modelling and stonecarving; James Walker, Ltd., decorative plaster; F. Jukes, metalwork; Carters of Brockley, wall tiling; Bennet Furnishing Co., school fittings; Lockerbie and Wilkinson, Ltd., cloakroom fittings; Croydon Water Co., water supply; "Permutit" Water Softener Co., water-softening plant.

ANNOUNCEMENT

Mr. William C. Porte, F.R.S.A., architect, has removed to "Mayfair," Arthur Square, Belfast. Telephone No.: Belfast 2482.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

H.M. Office of Works is to erect a post office in Five Elms Road, BECONTREE.

Plans passed by the BRENTFORD and CHISWICK U.D.C.: Alterations, 22 High Road, for Messrs. John Barker & Co.; first section, secondary school, Gunnersbury Avenue, for Mr. I. H. B. Scott; factory and offices for Trico-Folberth Ltd., Great West Road, for Mr. F. E. Simpkins; covered stands, Braemar Road, for Brentford Football Club; four houses, The Grove, for Mr. A. S. Earl.

The BRENTFORD and CHISWICK U.D.C. has purchased ten acres of land at Clayponds Lane for a housing site.

The CROYDON Corporation recommends plans prepared by Messrs. Berney and Macintosh for extensions at the town hall, at a cost of £75,000.

The CROYDON Corporation is to erect 124 houses on the Waddon estate extension.

Plans passed at GREENWICH: Offices, restaurant, etc., Woolwich Road, for Messrs. T. Enticknap and Sons; two houses, Vanbrugh Hill, for Mr. J. T. Walford; extensions, factory, Woolwich Road, for Mr. Alfred Roberts; two houses, Canberra Road, for Mr. Harold Davies.

The L.C.C. is to erect a new block at St. Alfege's Hospital, GREENWICH, at a cost of £39,000.

The L.C.C. is to extend the HACKNEY hospital at a cost of £44,275.

Plans passed at LEWISHAM: Thirty-four houses, Grove Park estate, for Mr. William J. Brise; two houses, Baring Grove, for Mr. G. W. Crosby; sports pavilion, Rubens Road, for Mr. Stanley F. Prior; four houses, Thorpewood Road, for Mr. R. Tomei; grand stand, Champion Hill, for Messrs. Archibald Leitch and Partners.

The LEYTON Education Committee is to erect an elementary school for 720 children in Connaught Road.

The L.C.C. is to rebuild the girls' central school, St. Thomas Street, LIMEHOUSE, at a cost of £23,500.

The L.C.C. has leased a site on the St. Helier estate, near MORDEN station, to Mr. H. A. Yapp, for the erection of a cinema with seating accommodation for 1,600 persons. The L.C.C. is also to develop another section of the estate by the erection of 577 houses, at a cost of £317 000 and to erect fifteen shops and houses in Green Lane, at a cost of £30,000.

The L.C.C. is to purchase from the Ecclesiastical Commissioners a site in NORTH BRIXTON, at a cost of £79,500, for the erection of 440 dwellings. The estimated cost of building is £250,000.

The L.C.C. is to erect a school for 640 pupils at Dog Kennel Hill, NORTH CAMBERWELL.

Plans passed at PLUMSTEAD: Extensions to factory, King's Highway, and three houses, Bassant Road, for Messrs. Wright and Renny; sixteen houses, Woodhurst Road, for Messrs. Eley and Allen; twenty-seven houses, Manton Road, for Mr. William F. Cabe; 250 houses, Churchfield estate, for Messrs. Eley and Allen.

The L.C.C. has approved plans for remodelling the Albion Street school, ROTHERHITHE, at a cost of £24,000.

Plans passed at STREATHAM: Twelve houses, Valleyfield Road, for Messrs. Bilham and Kidney, Ltd.; nine houses, Etherstone Road, for Mr. Raymond Tarling.

Plans passed at TOOTING: Additions, 196–8 Upper Tooting Road, for the Royal Arsenal Co-operative Society, Ltd.; six houses, Broadwater Road, for Mr. E. L. Cook; twelve houses, Fishponds Road, for Messrs. W. R. Hindmarsh & Co.

Plans passed at WANDSWORTH: Pavilion, Girdwood Road, for Mr. G. F. B. Sheldrick; car shelter and garages, Garratt Lane, for Mr. H. Reginald Ross; printing works, The Baulk, for Messrs. George Pauling, Ltd.; laundry extensions, Burr Road, for Mr. J. William Stevens; twelve houses, Combermartin Road, for Mr. E. D. Wallis; factory, Upper Richmond Road, for Messrs. H. Butcher & Co.; sixteen houses, Girdwood Road, for Messrs. Gooch and Lombard.

SOUTHERN COUNTIES

The Saltdean Estate Co. is to erect houses in Lustrells Road, BRIGHTON.

Plans passed at BRIGHTON: Alterations, 1 Middle Street, and additions, Elm Grove Tavern, Elm Grove, for Messrs. Tamplin and Sons Brewery, Ltd.; extensions, 2 Duke Street, for Mr. John D. Box; alterations, 7 Sydney Street, for Messrs. W. H. Woodward & Co.; eight houses, Ladysmith Road, for Messrs. T. J. Braybon and Son; extensions, 94–94A London Road, for Brighton Equitable Co-operative Society, Ltd.; twenty-six houses, Widdicombe Way, Bevendean, for Messrs. Braybons, Ltd.; additions, St. John's Home, Walpole Road, for the Committee of St. John's Home; licensed premises and flats, Charles Street and Marine Parade, for Messrs. Edlins, Ltd.

The Chichester Diocesan Fund is to erect a parish hall in addition to the church and vicarage on the Knoll estate, HOVE.

The PORTSMOUTH Corporation has prepared a scheme for the development of land on Wymering Farm by the erection of 118 blocks, comprising 410 dwellings, at a total cost o £169,000.

The PORTSMOUTH Corporation is to erect flats on the Taylor's Court site at Portsea, at a cost of £4,800.

The PORTSMOUTH Corporation has approved plans for the erection of thirty flats in York Place, Portsea, at a cost of £12,000.

SOUTH-WESTERN COUNTIES

The CHELTENHAM Corporation has approved plans by Mr. Rainger, architect, for the erection of fifty-eight houses on the St. Marks estate.

Plans passed by CHELTENHAM Corporation: Cinema, Winchcomb Street, for Albany Ward Theatres, Ltd.; two bungalows, Badgeworth Lane, and ten houses, Meads Road, for Mr. H. A. Bendall.

Mr. W. Thompson has prepared plans for the development of the Town Park estate, Shiphay, TORQUAY.

The TORQUAY Education Committee is to prepare plans for the erection of a senior school on a site in Quinta Road, for 320 pupils.

Plans passed by the TORQUAY Corporation: Twelve houses, Park Hill Road, for Messrs. H. Lloyd and Sons; bungalow, Teignmouth Road, for Messrs. C. Lax and Sons; bungalow, Newton Road, for Mr. H. Pearce; bungalow, St. Katherine's estate, for Mr. W. Murch; two bungalows, Burridge Road, for Chelston Building Co.; stores, 23–5 Union Street, for Mr. W. H. Creed; house, Barton Road, for Mr. E. J. Tolley; eight houses, Burridge Avenue, for Messrs. C. J. Donovan and Sons; clinics, Torbay Hospital, Newton Road, for the governors.

MIDLAND COUNTIES

The BIRMINGHAM Education Committee is to enlarge the Birches Green and the Gunter Road schools at Erdington, at a cost of £8,600.

The BIRMINGHAM Corporation is to erect welfare centres at Billesley and Kingstanding, at a cost of £11,640.

The BIRMINGHAM Corporation has purchased a site in Alcester Road South, for the erection of a branch bank.

The BIRMINGHAM Education Committee has obtained land near Carnarvon Road, Bordesley Green, for the erection of a junior day technical school.

The BIRMINGHAM Corporation is to erect a maids' home at the Dudley Road hospital, at a cost of £18,000.

The BIRMINGHAM Corporation recommends the enlargement of the Coleshill Hall mental colony, at a cost of £45,000.

The Free Church Council has obtained a site from the BIRMINGHAM Corporation in Shenley Lane on the Weoley Castle estate, for the erection of a church.

The BIRMINGHAM Corporation is to erect a works depot in Ealing Grove, Perry Barr.

The Roman Catholic church authorities have acquired from the BIRMINGHAM Corporation a site in Trittiford Road, Billesley, for the erection of a church.

The MANSFIELD Corporation is to erect fifty houses on the Reindeer estate, by direct labour.

Plans passed by the MANSFIELD Corporation: Four houses, Carter Lane, for Mr. J. P. Smith; four houses, Sandhurst Lane, for Mr. H. Baggaley; two houses, Sutton Road, for Mr. C. C. Stafford.

The NORTHAMPTON Corporation has obtained a site in Southampton Road, Far Cotton, for the erection of a branch library.

The WALSALL Corporation is to extend the motor bus depot at Birchells, at a cost of £4,750.

The WALSALL Corporation has approved the layout of the Bentley Moor housing estate, provision being made for the erection of 143 houses.

NORTHERN COUNTIES

The MANCHESTER Corporation is seeking sanction to borrow £250,000 for further housing advances.

A ward block is to be added to the Ancoats Hospital, Mill Street, MANCHESTER.

The MANCHESTER Education Committee is to acquire a school site adjoining Yew Tree Road, Fallowfield.

The MANCHESTER Education Committee is to obtain sites in the Blackley and East Didsbury districts, for senior school purposes.

The MANCHESTER Education Committee has passed plans for the erection of new premises on the Wilbraham Road site, for the Whalley Range High School for Girls.

An ice skating rink is to be erected in Wilmslow Road and Cromwell Range, Rusholme, MANCHESTER.

Plans have been submitted to the MANCHESTER Corporation for the erection of a cinema at the junction of Rochdale Road and Victoria Avenue, Blackley.

The TYNEMOUTH Corporation is negotiating for the purchase of 136 acres of land in the Smith Dock area, for a housing scheme.

The YORK Corporation has obtained sanction for a loan of £21,757 for the erection of houses and flats on the Burton Stone estate.

The North Riding Education Committee is to erect an elementary school for 400 children in the Tang Hall district near YORK.

The YORK Corporation is shortly to commence a scheme for the erection of 168 houses and sixteen flats on the Heworth Grange estate.

The YORK Corporation is to erect two additional blocks of old peoples' homes on the Heworth Grange estate and two blocks on the Garrow Hill estate.

Plans passed by YORK Corporation: Additions, "Spotted Cow" public-house, Barbican Road, for Tadcaster Tower Brewery, Ltd.; four houses, Jameson Terrace, for Mr. W. Johnson; house and business premises, Acomb Road, for Mr. H. C. Fawcett; additions, Cemetery Road, for York Cemetery Co.; two houses, Tang Hall Lane, for Messrs. W. West, Ltd.; four houses, Walney Road, for Messrs. T. and M. Caffrey; four shops and houses, Millfield Lane, for Mr. T. Harrison; thirty-two houses, Westwood Terrace, for Messrs. Relton & Co.; seven houses, Tang Hall Lane, for Mr. H. Williamson; shopping centre, Burnholme estate, Heworth, for Mr. J. N. Dunn.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_2	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter	1 8
Joiner	1 8
Machinist	1 9
Mason (Banker)	1 8
,, (Fixer)	1 9
Plumber	1 8
Painter	1 7
Paperhanger	1 8
Glazier	1 8
Slater	1 8
Scaffolder	1 4
Timberman	1 4
Navvy	1 3
General Labourer	1 3
Lorryman	1 5½
Crane Driver	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4"	6"
	s. d.	s. d.
Straight pipes . . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . . ,,	6 3	7 2
Rest bends . . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, ... ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers. . . . ,,	5 6	7 9
Yard gullies . . . . ,,	9 6	11 6
Interceptors . . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R. at Nine Elms:	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	3 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . . ,,	10
Nails, compo . . . . . lb.	4
,, copper . . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, ... ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured . . . ,, ,,	1 3
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 2" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1¼" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"	⅜"	½"	¾"	
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6	
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6	
Gaboon					
Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –	
Figured Oak					
1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –	
Plain Oak					
1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –	
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –	

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 0
,, ,, ½" . . . ,,	9 6
,, ,, ⅜" . . . ,,	9 0
,, ,, ¼" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of	3"	4"
ordinary thickness metal .	s. d.	s. d.
F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door ,,	—	6 9
Heads . . . . ,,		5 0
Swan-necks up to 9" offsets ,,	4 0	6 3
Plinth bends, 4½" to 6" ,,	4 0	5 6

Half-round rain-water gutters of	
ordinary thickness metal . F.R.	5 6
Stop ends . . . . each	6 7
Angles . . . . . ,,	1 7 1 11
Obtuse angles . . . . ,,	2 0 2 6
Outlets . . . . . ,,	1 9 2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 ,,	1 0 to	1 3
,, ,, 2 ,,	1 2 ,,	1 7
,, ,, 3 ,,	1 7 ,,	2 5
,, ,, 4 ,,	2 1 ,,	2 11
,, ,, 6 ,,	2 3 ,,	3 2
,, ,, 8 ,,	2 6 ,,	3 6
,, ,, 12 ,,	2 9 ,,	3 8
,, ,, 20 ,,	3 0 ,,	3 11
,, ,, 45 ,,	3 3 ,,	4 1
,, ,, 65 ,,	3 7 ,,	4 6
,, ,, 90 ,,	3 10 ,,	4 9
,, ,, 100 ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 ,,		1 0
,, ,, ,, 2 ,,		1 3
,, ,, ,, over 2 ,,		1 9
,, ,, plate, n/e 1 ,,		1 6
,, ,, ,, 2 ,,		3 0
,, ,, ,, 5 ,,		4 0
,, ,, ,, 7 ,,		5 0
,, ,, ,, 15 ,,		6 0
,, ,, ,,over 15 ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 9
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3	6
" to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10	0
" to form basement n/e 5′ 0″ deep and cart away	"	11	0
" " 10′ 0″ deep and cart away	"	11	6
" " 15′ 0″ deep and cart away	"	12	0
in stiff clay add	"	3	0
If in underpinning "	"	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER

		4″ s.	d.	6″ s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	R.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
½″ Horizontal dampcourse	Y.S.	5	6
½″ Vertical dampcourse	"	7	6
½″ paving or flat	"	5	6
1″ paving or flat	"	6	6
1″ × 6″ skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesepools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4	5	0
Do., 18″ × 9″	"	4	2	0
Do., 24″ × 12″	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½″ deal sawn boarding and fixing to joists	Sqr.	1	17	6
1″ " " " " "	"	2	1	6
1½″ " " " " "	"	2	7	6
3″ × 2″ fir battening for Countess slating	"		12	6
Do. for 4″ gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9″ joists	F.R.		1	0
1″ deal gutter boards and bearers	F.S.		1	4
1½″ " " " " "	"		1	8
2″ deal wrought rounded roll	F.R.			9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼″ do.	"	3	4	0
1½″ do.	"	3	13	0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼″ do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½″ deal moulded sashes of average size	F.S.	2	3
2″ " "	"	2	6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2″ " " "	"	4	6
Extra only for moulded horns	Each		9
1½″ deal four-panel square, both sides, door	F.S.	2	6
2″ " " "	"	3	0
1½″ " but moulded both sides	"	3	0
2″ " " "	"	3	6
4″ × 3″ deal, rebated and moulded frames	F.R.	1	6
4½″ × 3½″ " " "	"	2	0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½″ deal moulded wall strings	"	2	6
1½″ " outer strings	"	2	0
Ends of treads and risers housed to string	Each	2	0
3″ × 2″ deal moulded handrail	F.R.	1	6
1″ × 1″ deal balusters and housing each end	Each	2	6
1½″ × 1½″ " " "	"	3	3
3″ × 3″ deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	18	0
Do. in flashings	"	2	0	6
Do. in covering to turrets, etc.	"	2	7	6
Do. in soakers	"	1	13	6
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s.	d.	¾″ s.	d.	1″ s.	d.	1½″ s.	d.	2″ s.	d.	4″ s.	d.
		1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	6
Do. to stop ends	"		7		9	1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

		£	s.	d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1	3	
Extra, only stop ends	Each	1	0	
Do. angles	"	1	6	
Do. outlets	"	3	0	
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6	
Extra, only for shoes	Each	2	6	
Do. for plain heads	"	5	6	

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.	3	9	
Do. in n/w to beams, stanchions, etc.	"	5	6	
Lathing with sawn laths to ceilings	"	1	6	
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2	6	
Do. vertical	"	2	9	
Rough render on walls	"	2	3	
Render, float and set in lime and hair	"	3	0	
Render and set in Sirapite	"	3	3	
Render, backing in cement and sand, and set in Keene's cement	"	4	6	
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1″ girth	"			2
1″ granolithic pavings	Y.S.	5	0	
1½″ "	"	6	0	
6″ × 6″ white glazed wall tiling and fixing on prepared screed	"	1	2	0
9″ × 3″ " " "	"		7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

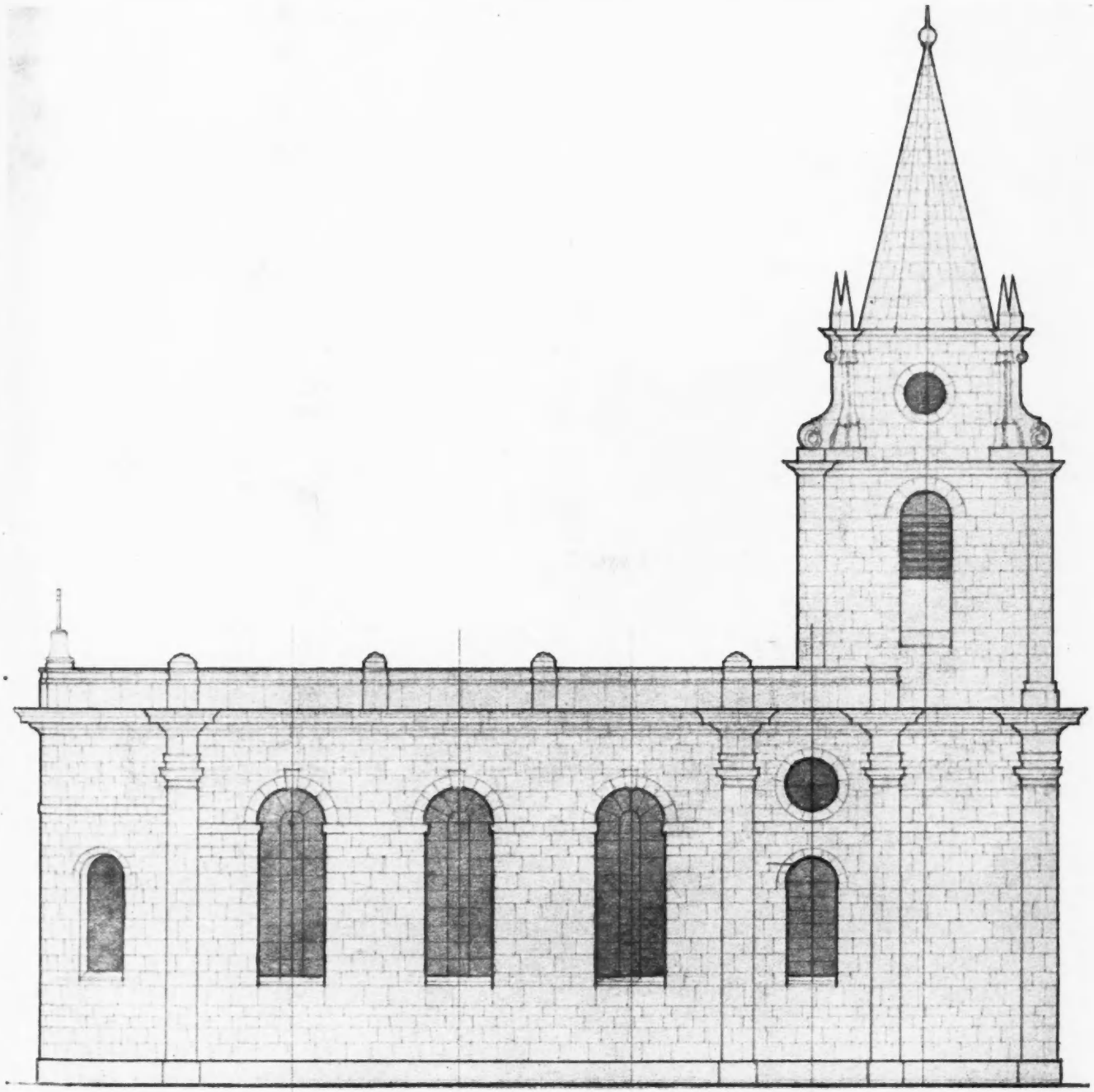
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

HONILEY PARISH CHURCH, WARWICKSHIRE

MEASURED DRAWINGS BY PHILIP B. HERBERT OF A BUILDING THAT IS ATTRIBUTED TO CHRISTOPHER WREN

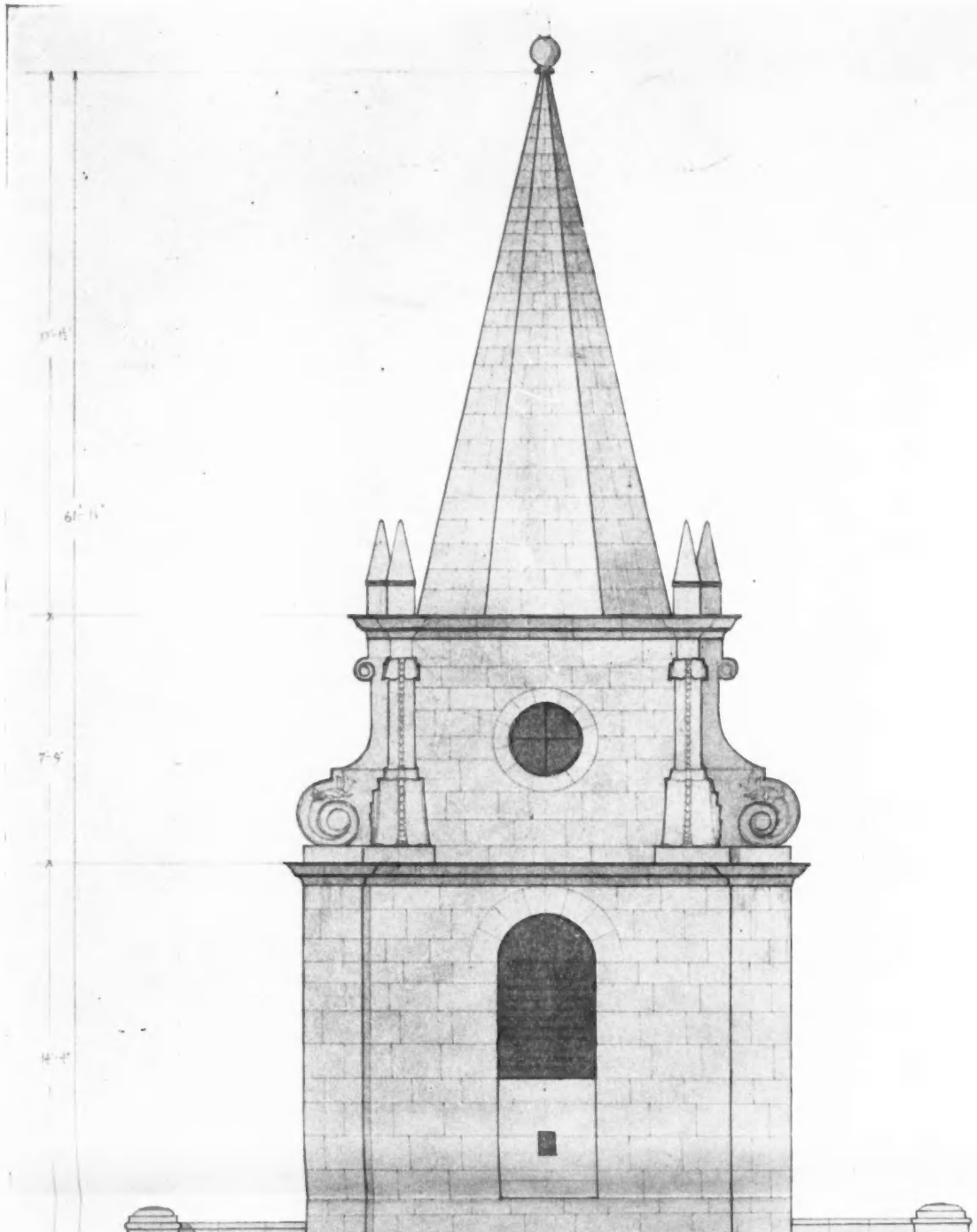


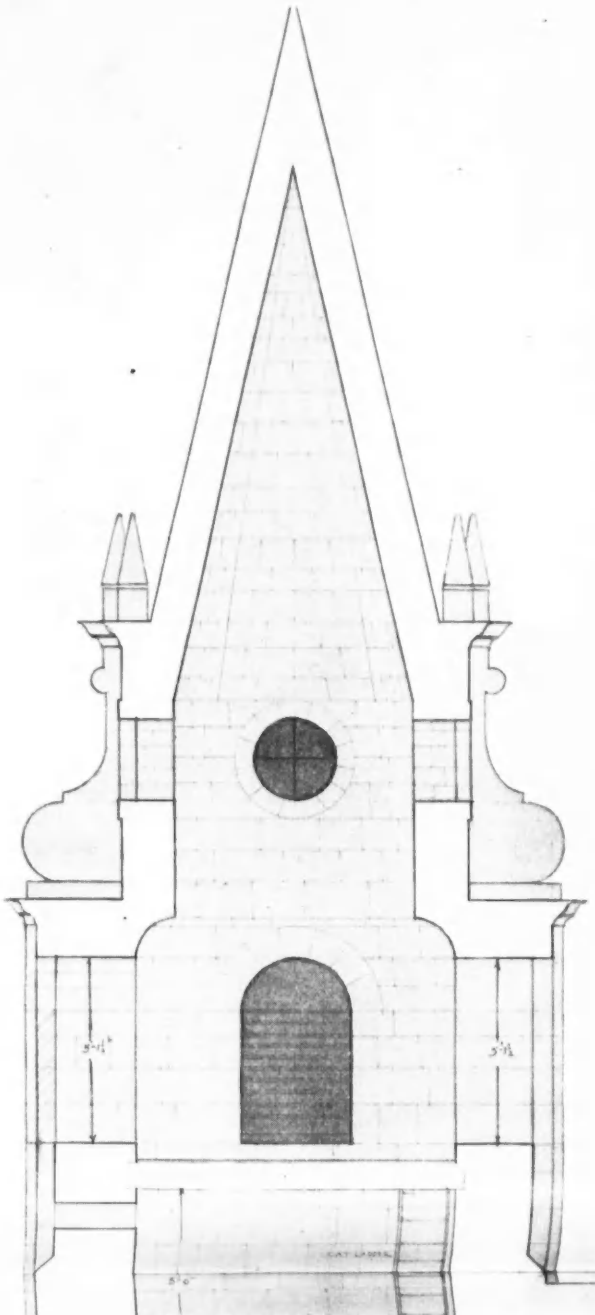
THE NORTH ELEVATION TO A SCALE OF 8 FEET=1 INCH

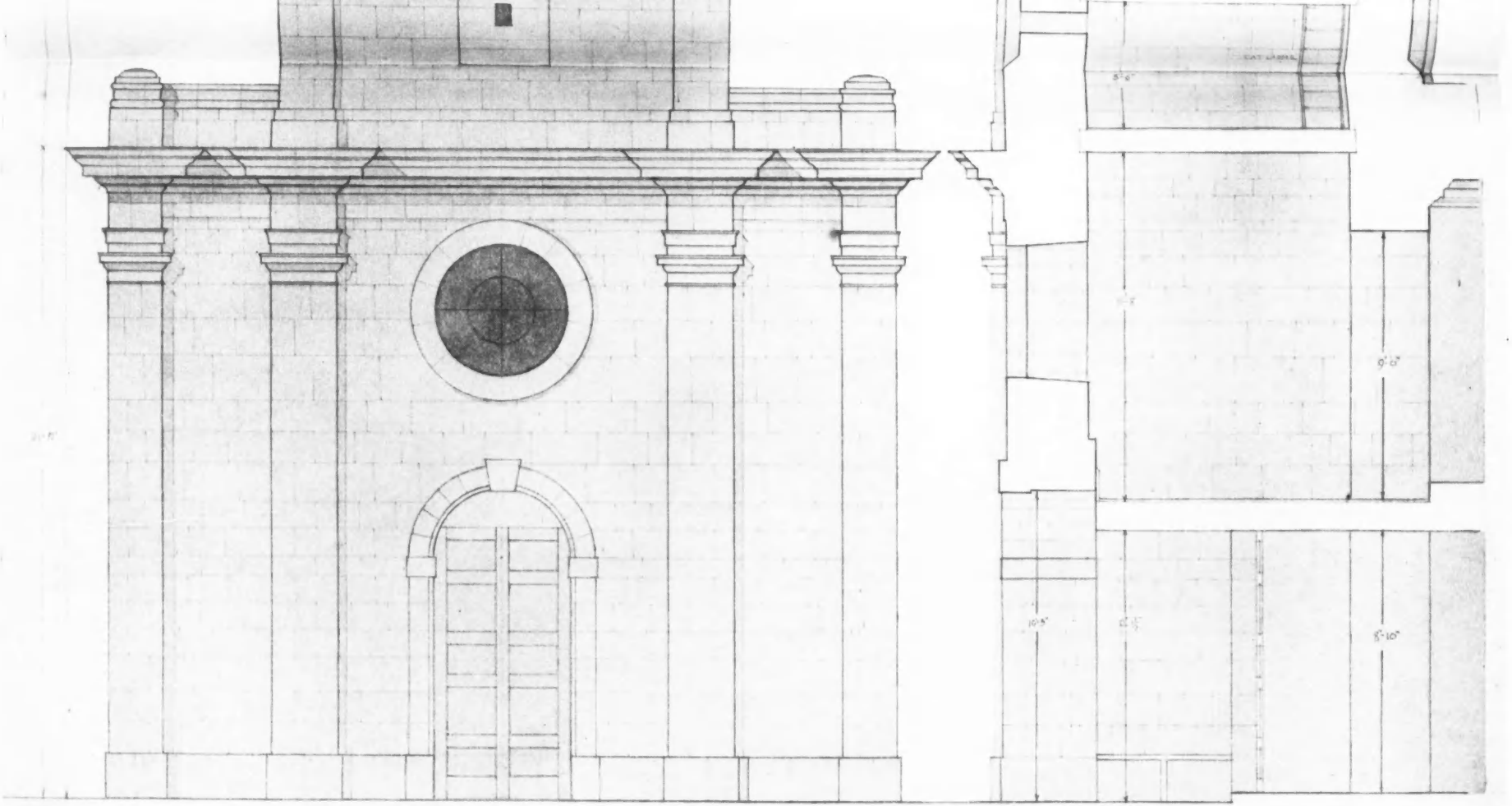
THE church chosen for illustration in this supplement, by means of an elevation, section, plan and details, in measured drawings, is that of Honiley, a village about 5½ miles north-west of Warwick. Originally the private chapel of Honiley Hall, it is in use today as the parish church.

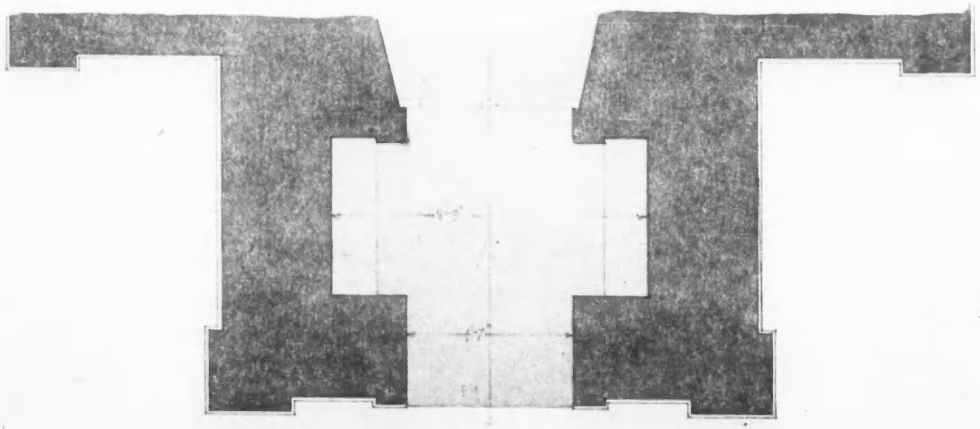
The design is attributed to Christopher Wren, and certainly has some characteristics identifiable with his style.

It is a point worthy of remark that the two columns supporting the organ balcony, indicated in the section and plan, are oval in section, but otherwise follow the usual Corinthian detail.





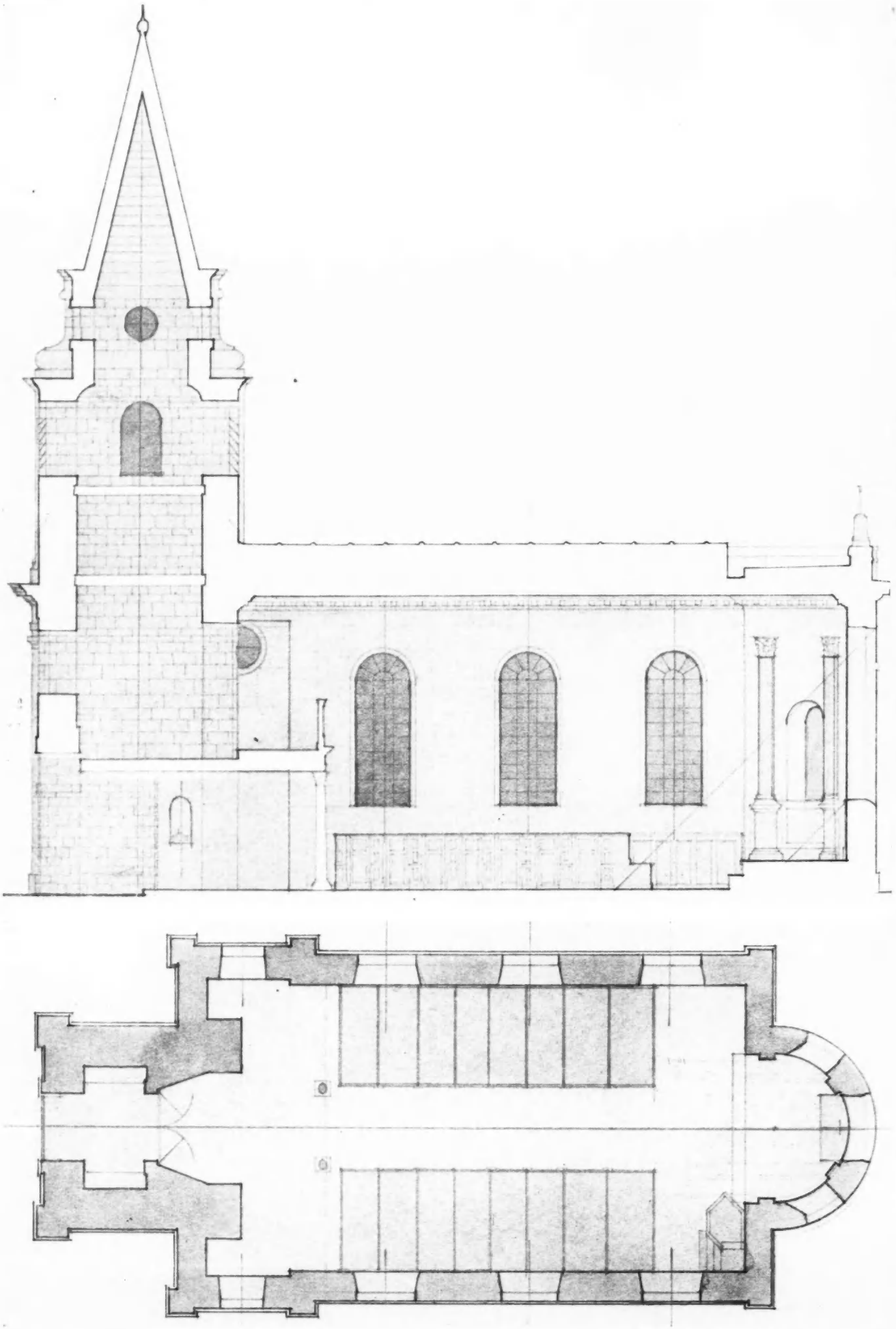




HALF INCH DETAIL of HONILEY CHVRCH

1 0 1 2 3 4 5 10 15

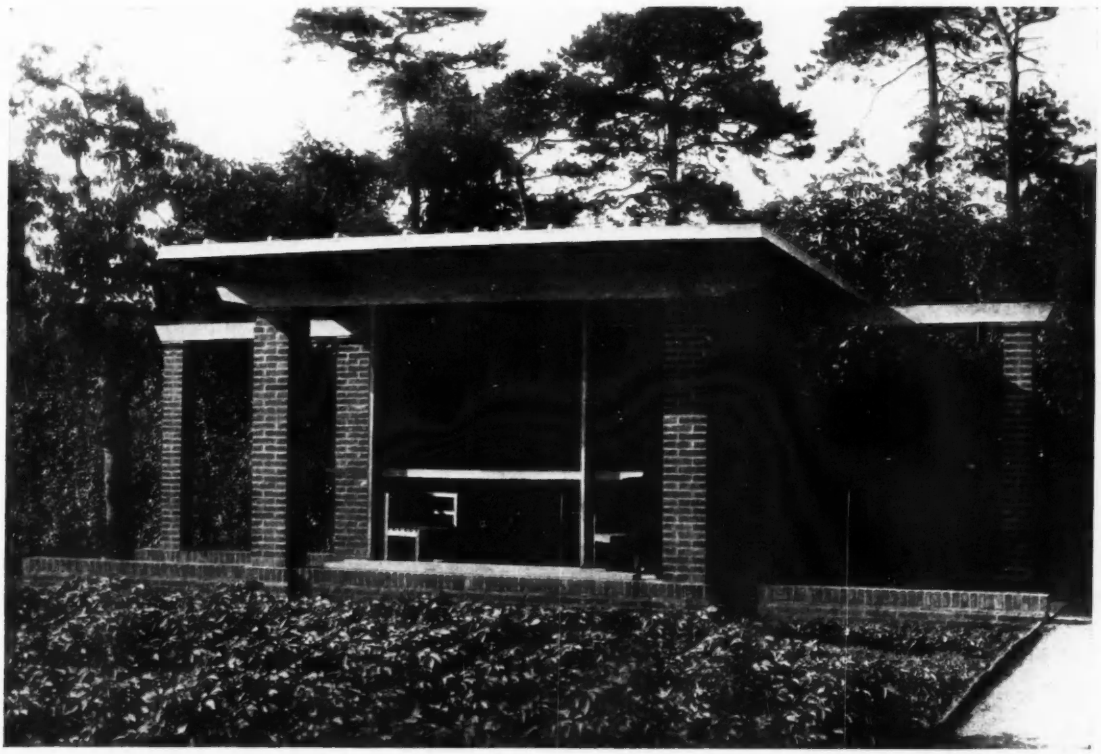
PHILIP B HERBERT MENS ET DELT
JULY 1924.



LONGITUDINAL SECTION, TAKEN LOOKING NORTH; AND PLAN (BOTH 8 FEET=1 INCH)

SUMMERHOUSE FOR HOSPITAL GROUNDS

ERECTED AT THE WILLIAM JULIEN COURTAULD HOSPITAL, BRAINTREE, ESSEX



[*Frank Roscoe, architect*

A FRONT VIEW OF THE SUMMERHOUSE FROM THE GROUNDS

THE summerhouse illustrated is situated in the grounds of the William Julien Courtauld Hospital, Braintree, Essex, and is yet another gift to the townspeople who have received so many buildings presented by Mr. Courtauld. Most readers will know of the Town Hall, Braintree, even if they do not know of the many other buildings presented by the donor of the hospital to which this latest addition is made.

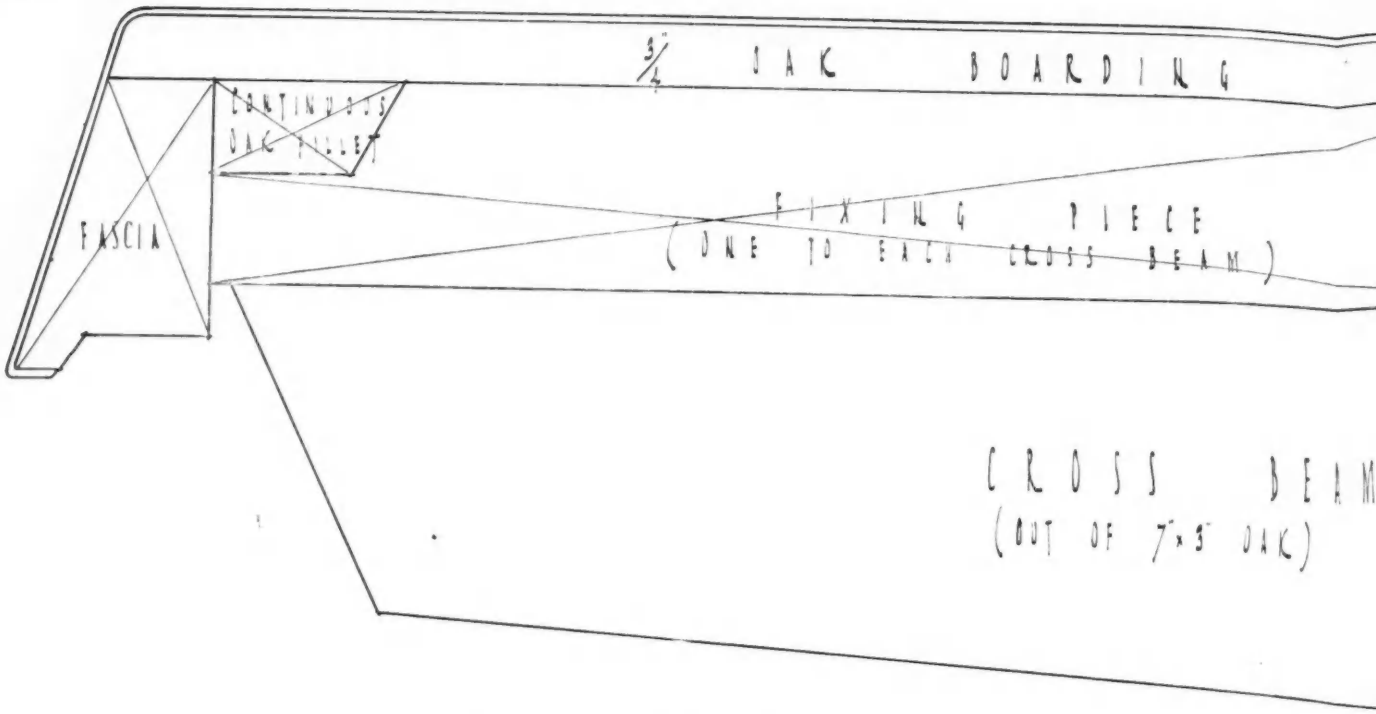
The requirements called for a summerhouse for shade as there was no place in the gardens affording protection from direct sunshine. Hence the open character of the structure, with a wide overhang to its flat roof to ensure that shelter from the sun might be provided and the cooling breeze of a summer evening enjoyed.

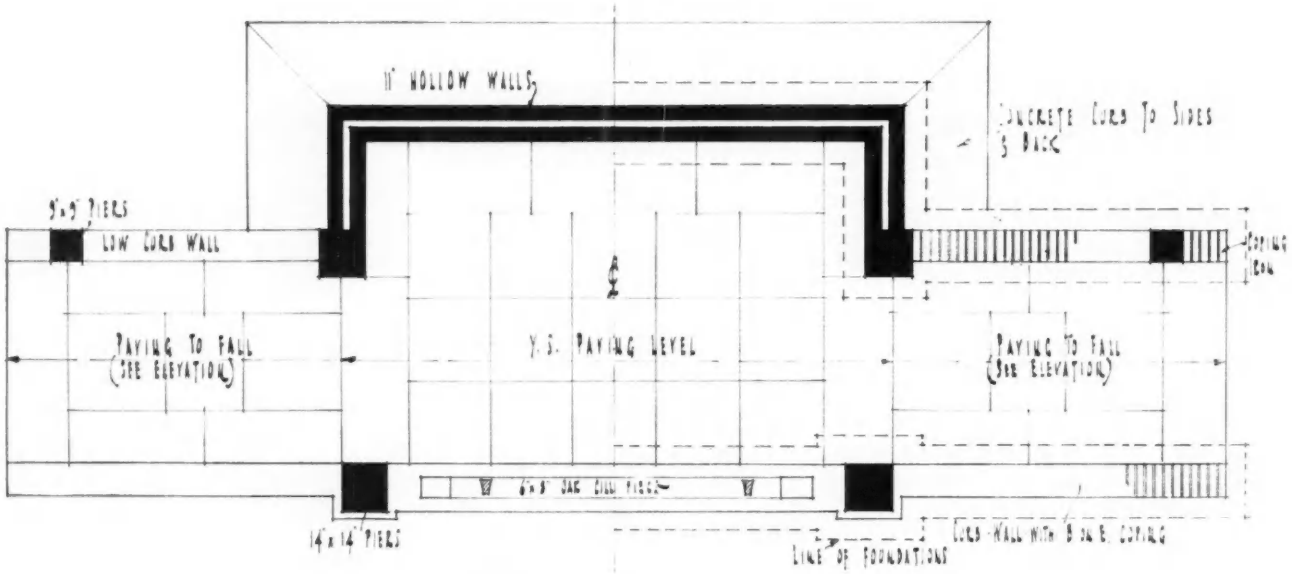
The plan form was adopted to suit the site requirements. It will be seen that the summerhouse is approached by side paths, flanking the cultivated bed, which is placed axially with the ward block of the hospital. It was thought best to preserve the circulation of these paths.

A fine hedge runs along the back. The flat roof, lead-covered and close copper-nailed on the fascia, in a simple yet ornamental way, allows of the hedge showing behind as much as possible, where a pitched roof on so small a building would have been pretentious and would have cut the line of the hedge very unfortunately.

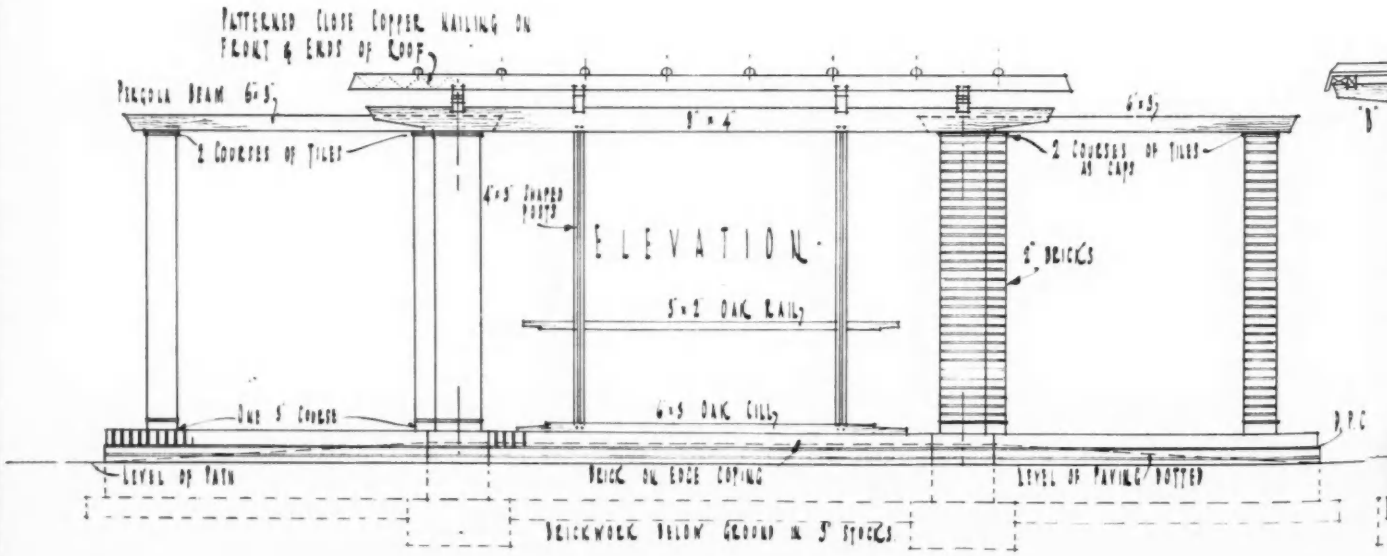
The whole of the timber work is oak, lime-treated, while the brickwork is in 2-in. hand-made facings. The floor is in sawn slabs of York stone which are cut square.

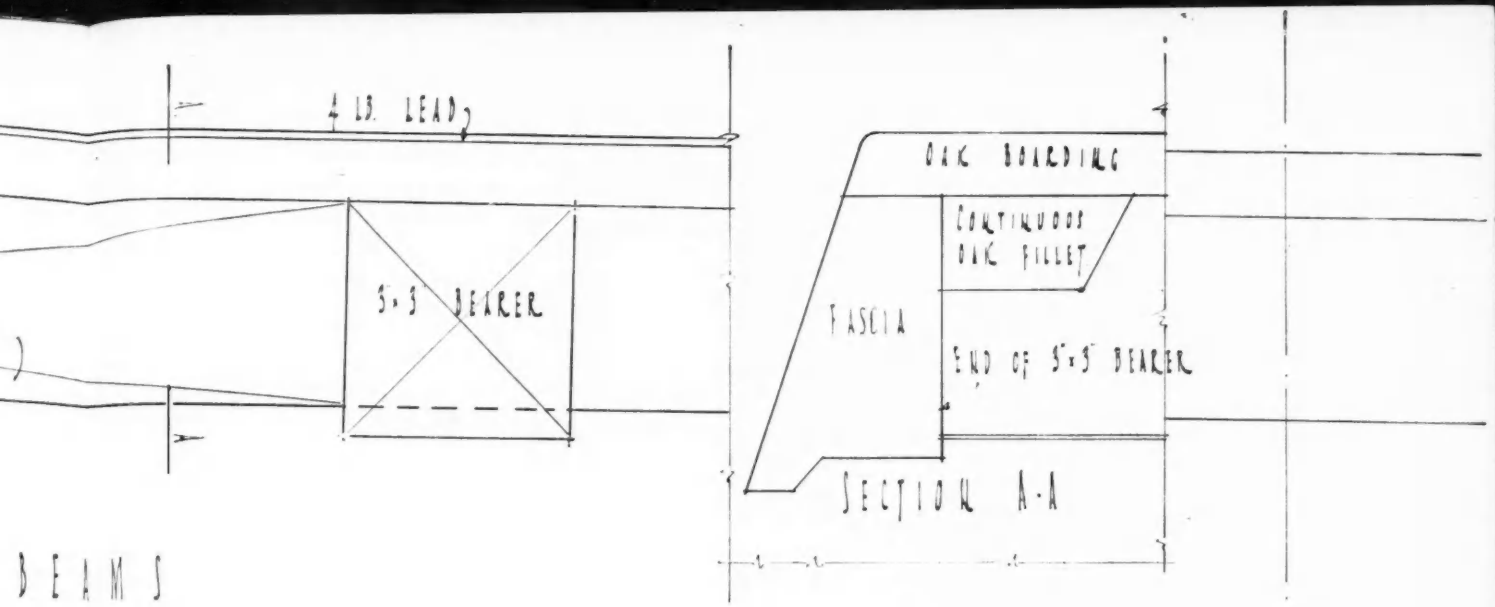
Two teak angle chairs complete the work.


¾" OAK BOARDING
CONTINUOUS OAK FILLET
FASCIA
FIXING PIECE
(ONE TO EACH CROSS BEAM)
CROSS BEAM
(OUT OF 7"×3" OAK)


11" HOLLOW WALLS
CONCRETE CURB TO SIDES & BACK
9"×9" PIERS
LOW CURB WALL
COPING
PAVING TO FALL (SEE ELEVATION)
Y.S. PAVING LEVEL
PAVING TO FALL (SEE ELEVATION)
6"×3" OAK SILL PIECE
14"×14" PIERS
CURB-WALL WITH B. & B. COPING
LINE OF FOUNDATIONS

PLAN -


PATTERNED CLOSE COPPER NAILING ON FRONT & ENDS OF ROOF
PERGOLA BEAM 6"×3"
2 COURSES OF TILES
4"×3" SHAPED POSTS
ELEVATION
5" BRICKS
5"×2" OAK RAIL
6"×3" OAK SILL
ONE 5" COURSE
D.P.C.
LEVEL OF PATH
BRICK ON EDGE COPING
LEVEL OF PAVING DOTTED
BRICKWORK BELOW GROUND IN 5" BRICKS



BEAMS
AK)

℄ OF FRONT PIER

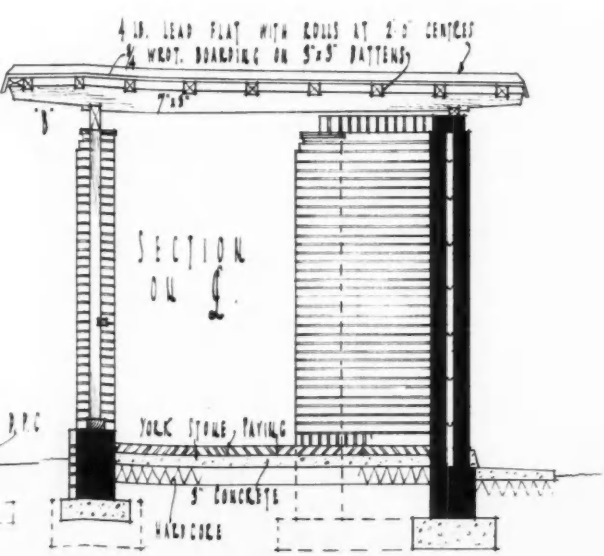
SUMMERHOUSE.

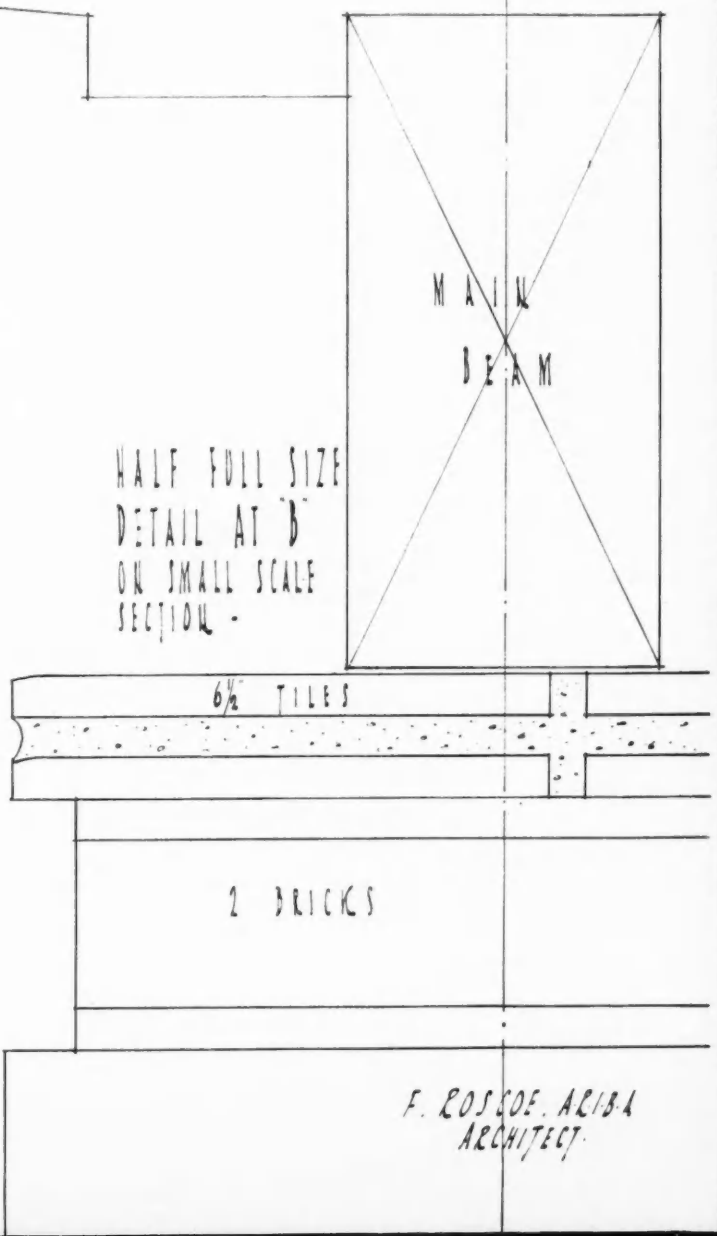
BRAINTREE HOSPITAL.

FOR

W. J. COURTAULD ESQ. J.P. C.C.

HALF FULL SIZE &
¼ IN. TO 1 FOOT DETAILS.

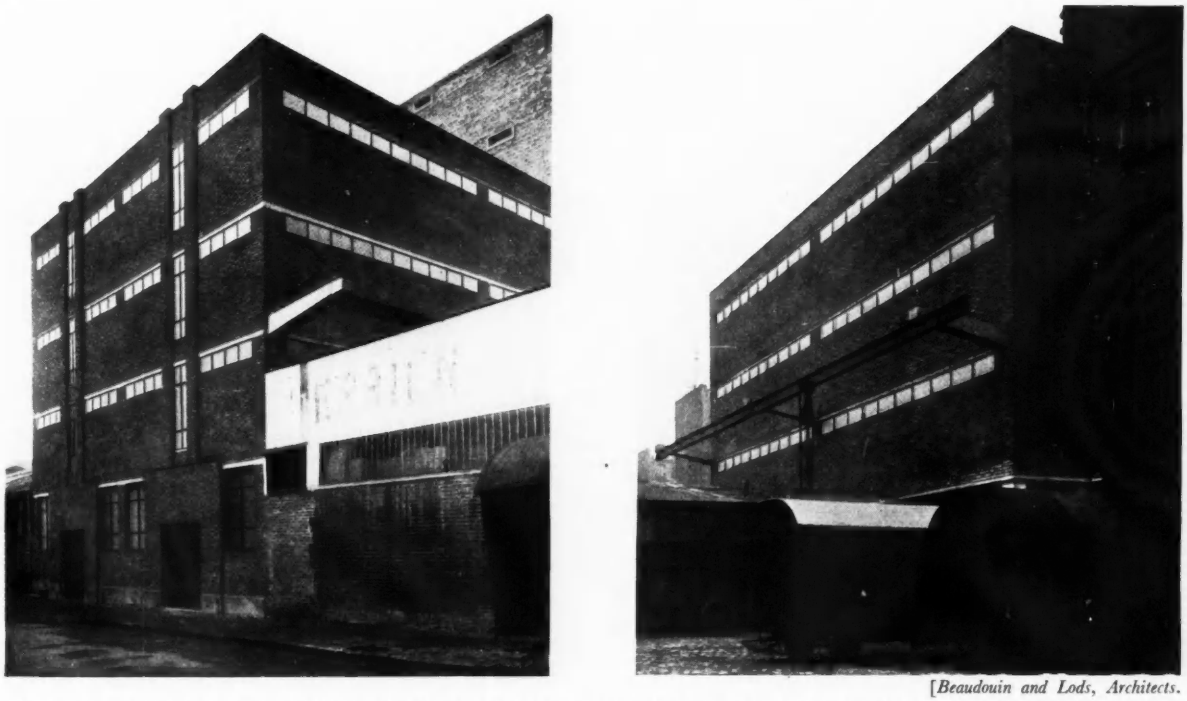




HALF FULL SIZE DETAIL AT 'B' ON SMALL SCALE SECTION.

F. ROSCOE. ARIBA
ARCHITECT.

SELECTED PRECEDENTS:
THE HORIZONTAL WINDOW

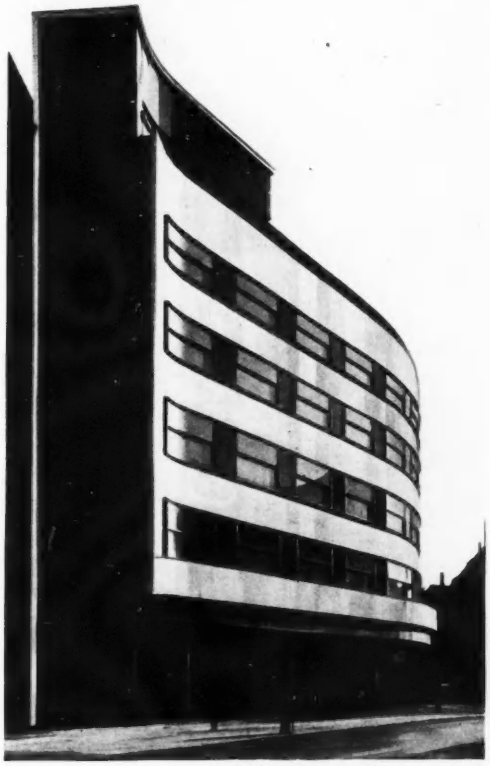


[Beaudouin and Lods, Architects.

1 and **2**. STREET FAÇADE AND COURTYARD FRONT OF A FURNITURE DEPOSITORY, ST. OUEN, NEAR PARIS.

THE longitudinal window, preached by le Corbusier as a sovereign panacea for half our housing troubles, plays a more practical rôle in modern warehouses and office buildings, where it is at once a logical corollary of steel-frame or reinforced-concrete construction, and an economical and rapid type of infilling. Instead of fenestration constituting a series of isolated punctuations of solids by voids, the present tendency in Germany, as figures **3**, **4** *and* **5** *illustrate, is to allow the windows to spread right across the façade in continuous, or semi-continuous, horizontal bands of glass wallage. The divisions between the windows in figure* **3** *are simply flat uniform mullions that separate the standardized units of four immensely long casements extending from side to side of the frontage. In figure* **5** *the three top stories form uninterrupted ribbons of glass running right round the three open sides of the building, without any break at the corners.*

The building shown in figure **1** *is an interesting hybrid example combining vertical and horizontal fenestration on the same elevation. Here a pair of upright windows are used quite logically to indicate two adjacent staircases. In the courtyard front, on the other hand (figure* **2**), *an expanse of blank wallage in plain brickwork is barred by three identical parallel bands of unit glazing, which reappear on the street façade, to light three floors of equal height and area.*



Luckhardt and Anker, Architects.

3. THE TELCHOW BUILDING, POTSDAMER PLATZ, BERLIN.

The Telchow Building (figure **3**) *is a large confectionery shop with a first-floor café, having office suites on top, completely revetted in slabs of white and dark blue vitrolite. The Westfalenhaus, a reinforced-concrete structure, faced with large ceramic tiles, erected on an irregular site, really consists of two separate buildings. The main part (figure* **4**) *comprises shop premises and offices, with a prominent tower at one corner; while its annexe (figure* **5**), *which has different roof and floor levels, contains a two-storied café with an all-weather balcony, and three floors of offices and showrooms for a Co-operative Society above.*

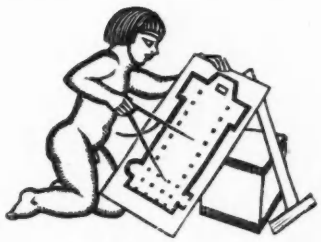
P. MORTON SHAND

4. THE WESTFALEN-HAUS, DORTMUND: THE MAIN BUILDING AND TOWER.

[By courtesy of "Hochtief" A.G., Essen.

5. THE ANNEXE OF THE WESTFALENHAUS, DORTMUND.

THE ARCHITECTS' JOURNAL



WEDNESDAY, AUGUST 12, 1931

THE LABYRINTH

IF the ignominious failure of the L.C.C. to prepare a workable plan for a bridge at Charing Cross has proved anything, it is the necessity for a plan for Central London.

Charing Cross in its early stages was a bridge. Next, it was a traffic scheme. Then an improvement scheme for the south bank. Lastly, it is seen to be part of the greater plan of London. We advance.

Incontrovertibly we advance, though we but reach conclusions arrived at by thoughtful men half a century ago, applying ourselves to problems which the other capital cities of the world are already solving. New York, Berlin, Rome, and now Paris are working according to plan.

London alone, possessing few of the initial advantages of these cities, a haphazard accretion of centuries' growth, lumbers forward to an unknown future.

Let bridges be the subject and we can name at once Southwark Bridge, Lambeth Bridge and the proposed St. Paul's Bridge, none of which can be provided with approaches that will produce traffic enough to fill them. Southwark Bridge lies, half deserted, a stone's throw from congested thoroughfares, and Lambeth Bridge, built to a limit of wideness, debouches on the north through a bottle-neck, which one can nearly say was designed by the Westminster City Council, on to a hinterland of narrow streets for which no scheme of re-planning exists.

But the bridging of the river is but a part of the machinery of the metropolis. Leading north and south, these bridge roads spread and enmesh themselves into a labyrinthine complexity of streets, mile upon mile—miles that have been slowly added to miles in blind growth—until the brain wearies of streets, and the idea of London becomes only a dirty dreariness.

Yet this dreariness has certain cohesions, nuclei, framework. By a ceaseless effort it contrives to function. It has circulation.

Looked at in the large, it is this circulation, daily enfeebled by congestion, that we have now to provide with further channels in an effort to keep our civilization alive. Left alone, congestion and vested interest will strangle us, and unplanned London will cost us more than we can afford to pay.

Re-planning London will be a long job. The initial stages entail scientific study that might well occupy years, even though ten weeks of really co-ordinated examination would enable us to plan ahead with fair chances of success. The great thing is to start, and to start well, with the determination for action, for we can no longer afford another year's delay.

What does such a re-planning involve? Two things, we think, are primarily involved: hard fact and imaginative manipulation of fact.

For the first we require an organization capable of assembling the facts about London with the utmost speed and accuracy. Many organizations pledged to such a service already exist, but only a paid organization can sustain the effort necessary for such a job, for a great deal of it has little recognizable connection with planning and less with civic ideals. It can only be done by men who like that sort of thing, and is no work for amateurs.

These facts, covering the whole physical and social structure of London, require to be assembled, presented in readable and analysable form, and used as a planning matrix. The man who can use this material, transmute and re-create it, must be an artist, a man of imagination, something of a prophet—the better prophet for having a basis of fact from which to prophesy. He must be an organizer, one who can use others, find a place in the plan for those whom a less generous system would exclude as being not officials but ordinary citizens.

And this man must be architecturally-minded, urbane in the best sense of the word that includes all of a town, the lesser and the greater. If we were asked what man could carry so many virtues, we would indicate Dr. Schumacher, of Hamburg, as the type of such a man—sociologist, architect, artist, man of imagination.

We don't believe this plan of London is work for a committee functioning as a committee, but for a man, helped, if you like, by a committee, but a man, acting, guiding, stimulating and *continuing* one great work.

The plan of London is needed desperately, but it must be gone about as though it were the grandest, noblest thing we ever did. And we should pay handsomely for it.

FIFTEENTH CENTURY ENGLISH HOME

The grounds of Great Dixter, Northiam, East Sussex, were thrown open to the public on Saturday last in furtherance of the scheme in aid of the Queen's Institute of District Nursing. Visitors had the additional privilege of inspecting the house—one of the most beautiful survivals of Fifteenth Century domestic architecture.

The upper view shows the east end of the great hall, dating from *circa* 1450; the lower, the north front, seen from beyond the sunk garden.

The house is now the residence of Mr. Nathaniel Lloyd, a frequent contributor to these pages, whose *History of the English House* is in preparation for late autumn publication by the Architectural Press.

NEWS & TOPICS

THE HISTORY OF REGISTRATION

THE beginning of the movement for the voluntary registration of architects in Great Britain, writes Mr. C. McArthur Butler, Secretary of the R.I.B.A. Registration Committee, in discussing the early history of registration, dates from 1791, 140 years ago, when the Architects' Club was founded by some of the leading architects, including Sir William Chambers, Robert Adam, John Soane, and S. P. Cockerell. This was followed in 1806 by the establishment of the London Architectural Society, probably the first institution having aims and objects similar to those of the present Royal Institute. It seems that this Society became extinct before the formation of the Architectural Society in 1831 In 1834 it became evident to some of its members, architects of established reputation, that although most of the other arts and sciences had their Associations for the promotion and cultivation of their art, architecture, which embraced the whole of the arts and sciences, was without such an establishment in this country, and in 1842 the Architectural Society joined the Institute of British Architects, which had in the meantime been formed in 1834 and had received a Royal Charter in 1837.

★

The principle of the formation of a register of architects by, and under the control of, the R.I.B.A. has been acknowledged and accepted in Great Britain for nearly 100 years. In 1859 the Council of the R.I.B.A. adopted the principle of the examination of architects, whether members of the Institute or not, and the examination was made compulsory for Associateship in 1881, but it was not until 1884 that the first attempt to secure statutory registration was made by the then newly-constituted Society of Architects, a body formed mainly by members of the R.I.B.A., who were dissatisfied with the inactivity of the senior body on the question of statutory registration. Bills for the Statutory Registration of Architects were introduced into Parliament from time to time by the Society of Architects, which also carried on an intensive campaign amongst members of the profession and other interested callings, and in the course of time so consolidated professional opinion in favour of statutory registration that in 1905 the Council of the R.I.B.A. formally adopted the policy.

★

In the meantime the question of statutory registration had been discussed at International Congresses of Architects held in Paris (1900), London (1906), Vienna (1908), and Rome (1911), at each of which resolutions were passed expressing in effect the view that, in the interests of the public of all nations and of the profession of architecture, all practitioners should have statutory qualifications, and that the title "architect" should be restricted to persons provided with certificates of capability, to be placed within reach of all, by means of architectural education and training. After the interruption caused by the Great War, 1914–1918, the R.I.B.A. invited the Society of Architects to negotiate for closer co-operation, and in 1925 the two bodies were amalgamated and the Royal Institute undertook to promote and use its utmost endeavours to carry through a Registration Bill until it became an Act of Parliament. Immediately following the amalgamation, the R.I.B.A. drafted a Registration Bill, and in December, 1926, the text of it was published and submitted to kindred institutions and universities and other interested bodies, and amendments were made to meet their views as far as possible. Thus was settled the Bill out of which the present Act has grown to (almost unrecognisable) maturity.

THOSE ADAM FIREPLACES

Developments are awaited, as they say, in the case of the four Adam fireplaces, feloniously, burglariously and vandalistically abstracted from a house in Bedford Square, owned by the Architectural Association, but for the time being unoccupied. Applying to the problem the question of motive, the detectives in charge of the investigations are said to be of the opinion that the ultimate intended destination is the continent of America, a dry land, athirst for art souvenirs, among other commodities. Hence a watch is being kept at the English ports. But even in these hard times of diminished exports the chances of detection by this method seem formidably slender, the possibilities of their slipping through in cases labelled "Machinery. Do Not Drop" or some such fiction, fair. I doubt whether the A.A. will see their fireplaces again—which is hard luck, as it is only a couple of years since they lost one or two out of their own building.

SOMERSET COTTAGES

One of the most handy and practical booklets I have ever seen, dealing with the care and enlargement of old cottages, has just been issued by the Somerset Rural Community Council. Every visitor to Somerset knows that in the county are a great number of small houses and cottages, with stone-mullioned windows and well-moulded dressings, rather similar to cottages to be found in the Cotswold country. There are also in West Somerset many dwellings with cob walls, wood-framed windows and thatched roofs, and chimneys in front. It is advised that stone-tiled roofs should, if possible, be relaid, with stone tiles, but if this is too expensive, with a soft dun-coloured tile or even an asbestos tile, if of russet colour.

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It is reported that a quarry has recently been opened which will provide Wiveliscombe slates of good quality. A special word is said in favour of thatch. "Well-laid of good wheat straw, it has, to start with, a life of twenty-five years, with renewals to the heading of the ridge, but in reality a life far longer than that and at little cost for repair." I understand that one of the Surrey Councils is thatching its cottages at the present time. In a few pages this document contains a volume of practical hints.

A VIENNA PERMANENT BUILDING EXHIBITION

The *Werkbundsiedlung* housing estate in Vienna, which is being constructed under the auspices of the Austrian *Werkbund* to the designs of thirty of the most prominent Austrian and foreign architects of the modernist school, will be shown as an exhibition of the modern home during the months of May and June, 1932. French, German, American, Dutch and Russian architects will be represented by houses which, as at Stuttgart, will later form part of one of the City of Vienna's rehousing colonies. The site of the exhibition is a wedge-shaped piece of land between the Veitinger-Gasse and the Jagdschloss-Gasse. Among the foreign architects participating are Richard Neutra, André Lurçat, Gabriel Guevrékian, Hugo Häring and Rietveld. Austria is well represented by Josef Hoffmann, Josef Frank, Clemens Holzmeister, and younger men like Hans Vetter.

ASTRAGAL

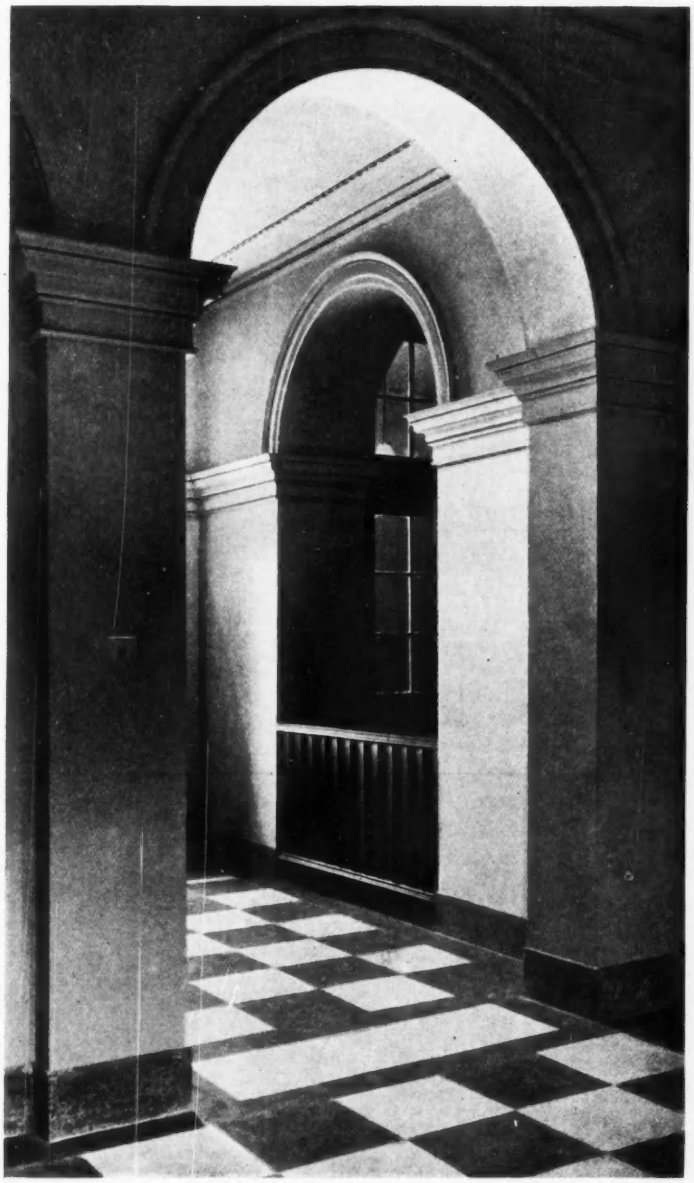
Aladdin Factory, Greenford, Middlesex.] [*By Nicholas and Dixon-Spain.*

THE ALADDIN FACTORY

The main entrance front which will eventually face the projected prolongation of Western Avenue, a new one hundred foot arterial road. Details of the tower, which is constructed in brick and stone, and contains water storage, are reproduced on a special supplement accompanying this issue.

THE ALADDIN FACTORY

DESIGNED BY NICHOLAS AND DIXON-SPAIN



Looking from the staircase hall into the entrance hall in the direction of the inquiry office facing which is the waiting-room for visiting callers.

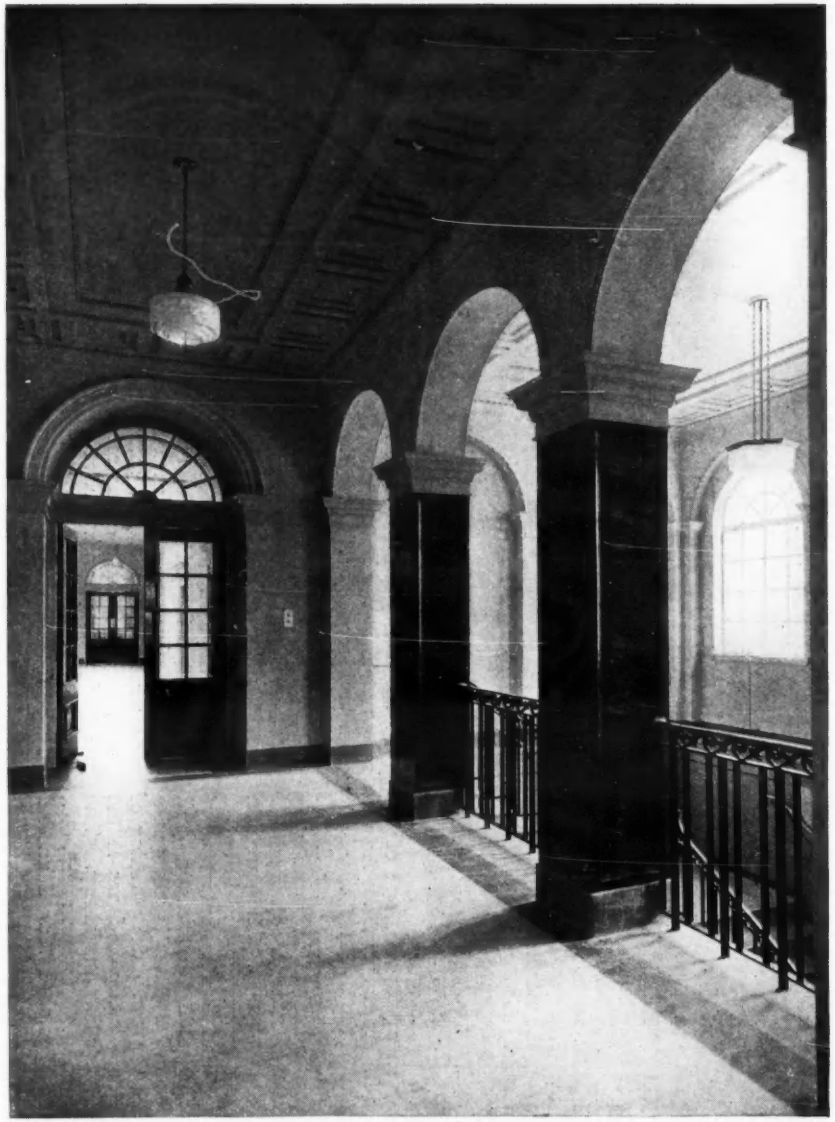
EIGHTEEN months ago Messrs. Aladdin Industries, Ltd., secured a site at Greenford, bounded on the north by the Grand Junction Canal, with a depth of 328 ft. and a frontage of 1,350 ft. to the projected prolongation of Western Avenue, one of the new 100-ft. arterial roads. At the eastern end of the site they have built a group of buildings, the character of which gives a lead to later comers in what may become a distinguished commercial avenue. The western portion of the site is to be laid out as a sports ground for the employees.

The main building consists of a block of administrative offices together with the factory proper. The planning of the building directly conforms to the layout of specialized machinery. The floor space allotted to works area, etc., is upwards of 30,000 sq. ft. Connected with the factory are suites of locker rooms and lavatories for men and women, laboratory and experimental rooms, works manager's office and a dining-room, 58 ft. by 28 ft., with fully-equipped kitchen and service.

The administrative offices, on two floors, have a frontage of 172 ft. by a depth of 52 ft., and house export office, offices for principals, accounts office, conference- and show-room, strong room, store rooms, stationery room, rest room and a dining-room for the clerical staff, with service room. The central tower, 90 ft. high, provides storage for water, which is pumped from an artesian well 450 ft. deep.

While there is perhaps little in this block of buildings which may be termed "novel," the various methods of factory construction were fully explored by the architects, and the one adopted appears to be easily the best suited to the programme. The high proportion of window area results in extremely well-balanced lighting in all parts of the buildings, and, in face of this, it is difficult to maintain an argument in favour of the all-glass walls of some Continental examples even for this northern clime.

The arrangement of the plan follows the sequence of processes of the industries for which the factory was built, and the general welfare has been provided for in the spacious dining-room, rest and first-aid rooms. The temperature of the dining-room and



The first-floor landing, looking towards the corridor leading to the staff dining-room, etc.

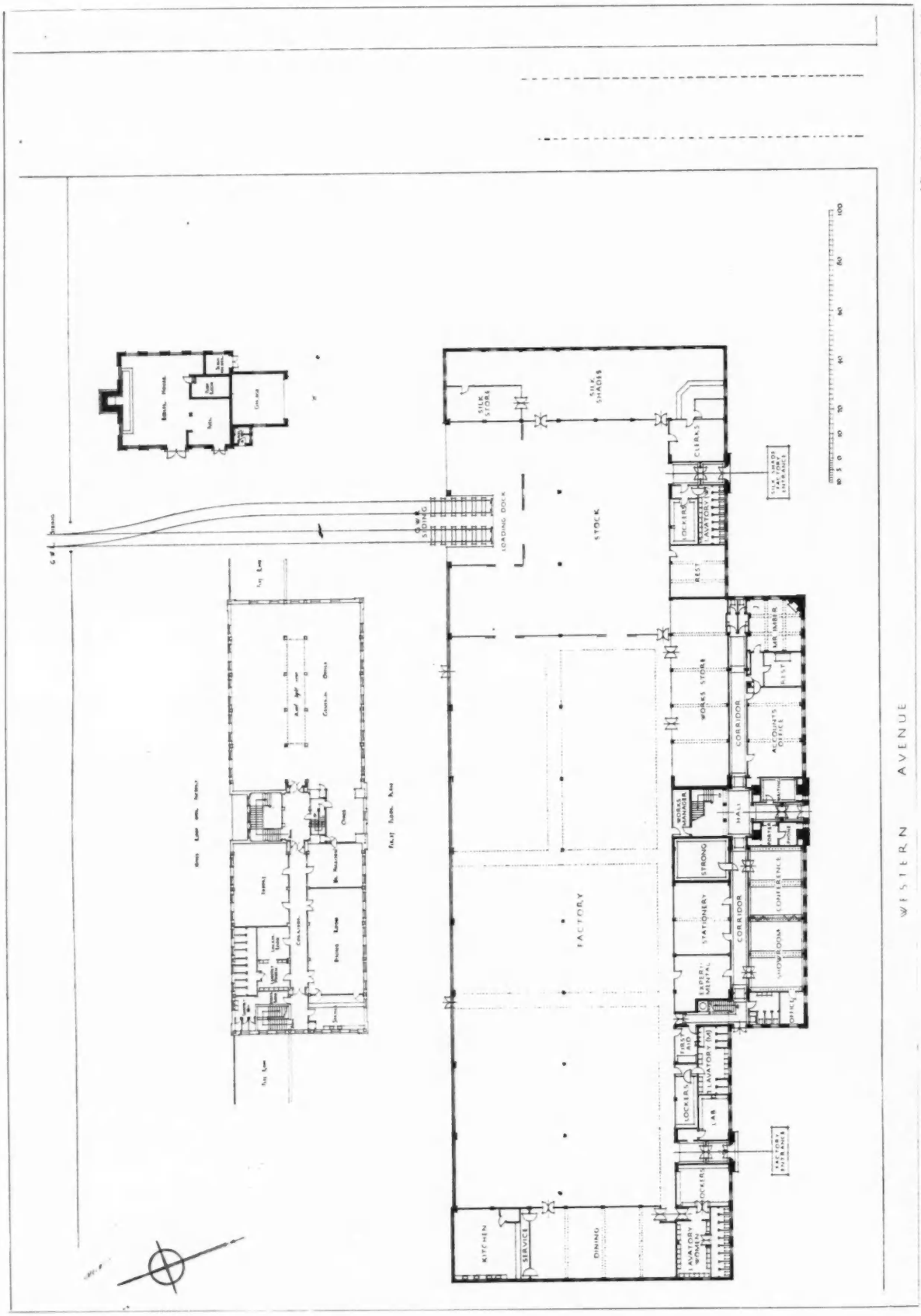
The managing director's room, on the ground floor, which overlooks the main front.

Aladdin Factory, Greenford, Middlesex.]

The light, airy and spacious works dining-room. It is connected with a fully-equipped kitchen through the service doors seen in the far wall.

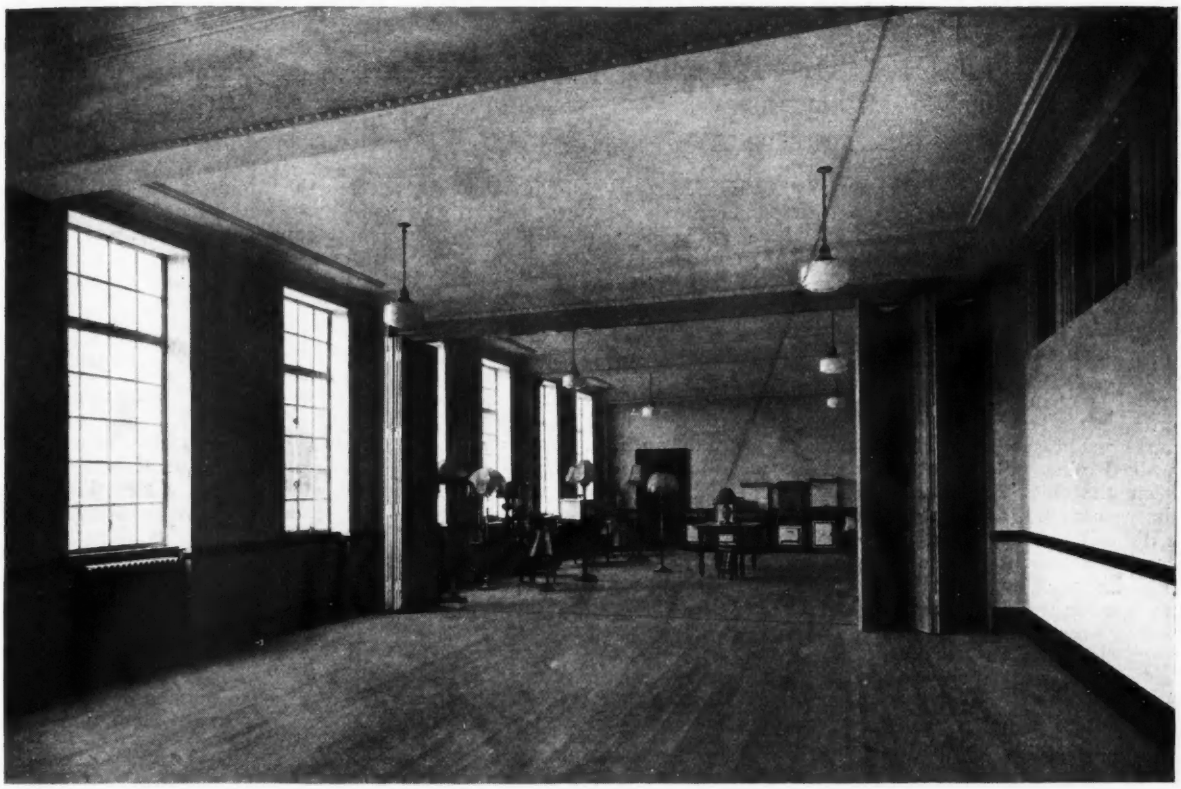
[*By Nicholas and Dixon-Spain.*

The workers' lavatories, like many other features of this model factory, are above the ordinary factory standard and have locker rooms adjoining them.

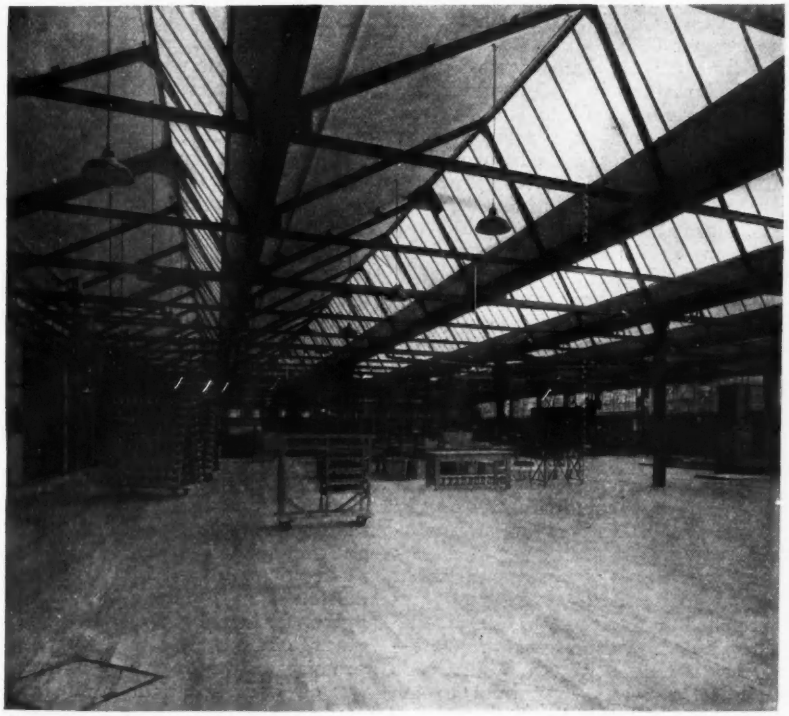


Aladdin Factory, Greenford, Middlesex. [*By Nicholas and Dixon-Spain.*

Plans of the ground and first floors of the factory and ground floor of the boiler house and garage. A portion of the site will be laid out as a sports ground.



Looking from the conference room, at present unfurnished, into the showroom. Note the high proportion of window area and the suspended folding partition between the two rooms.



Aladdin Factory, Greenford, Middlesex.] [*By Nicholas and Dixon-Spain.*

North light roof-construction in the factory. The planning conforms to the layout of machinery specialized for the manufacture of the firm's products.

other apartments has been schemed to be the same as that of the working bays.

The walls are of brickwork and the floors of trussed concrete. The whole of the floors, including the works area, are laid with maple boarding.

The exterior colouring is that of natural materials, well chosen for colour, which time cannot affect adversely. For example, the brickwork is 2-in. multicolour, with Bath stone dressings. The building is, indeed, likely to become only the more mellowed with the onset of time. It may even become black, since the materialization of this group of buildings appears to have given the locality fresh impetus.

The Aladdin factory and that for Messrs. Heinemann at Kingswood (illustrated in THE ARCHITECTS' JOURNAL for August 14, 1929), are outstanding examples of recent commercial work from an architectural standpoint. Their style impresses one with a sense of reasonable co-operation and *esprit de corps* in manufacture, and they stimulate the hope that there may be many more to follow, housing a contented and well-working community and signifying good work, good wages, pride-in-work and an abiding and just collaboration between capital and labour.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xii

AN ARCHITECT'S EARLY GRUEL

BY KARSHISH

(H. B. CRESWELL)

ONCE, on a solitary walking tour, I covered three miles in company with a pedlar. He was a man of fifty, of indifferent physique, who had been a draper's assistant on Ludgate Hill until greying hair signalled his dismissal. His custom lay chiefly at outlying farms; and he tramped in a bowler hat, black morning coat and umbrella, carrying small articles of haberdashery in two baskets slung from a strap across his shoulder. He told me he walked nine miles one day and eighteen the next six days a week all the year round, and when I asked if he did not get greatly fatigued—for he carried a weight of one hundred pounds—his reply astonished me.

"It's not the walking that tires," he said. "It's the *talking*."

This revelation of an actuality of the pedlar's trade, made me for the first time conscious of a salient fact of my own profession, namely, that it is not the job that taxes, but the *people*.

I imagine the architect's heaven to be a place where he conceives, designs, constructs, specifies and directs, free from the obstruction of other persons and from preoccupation with the safeguards which the imminence of that obstruction calls for—a place where he is never misunderstood; where his wishes are never thwarted; where interferences by clients and public authorities, resistance by contractors, and disloyalty and incapacity of assistants and workmen, are unknown. Until, if ever, he wins to heaven, however, a conscientious architect can only get his work done by sustained violence of purpose: however suave, orderly and ingratiating his method of enforcing his will may be, he cannot relinquish for a moment the watchfulness of a boxer in the ring.

I should be much interested to know whether there is any architect of experience who, after honestly scrutinizing his own inwards, will quarrel with this generalization; for it is true of myself and to my observation of others. I refer to the matter here in order to justify my use of the word "gruel"; for when I took up my work as Resident Architect to the Eureka Plough Company at Nollingborough, I found myself beset not merely by the greatest amount of obstruction that normal conditions of architectural practice allow, but by a deliberate and malicious hostility and organized opposition, rooted in that petty enviousness and mean rivalry that no one who is unfamiliar with commercial life and the trivial, jealous self-consequence of a small provincial town, will readily understand.

Most men begin independent practice, tentatively, with small works of a kind with which they are familiar, commissioned by clients who are indulgent well-wishers; and with professional friends near at hand to guide their decisions, compose their doubts and inform their inexperience; and armed also with the authority of the accredited agent—for such, in law, the architect is—to command the obedience and hold the respect of those they are called upon to direct. What, however, was my predicament?

I was pitchforked into vast building proposals—measurable, literally, by the *acre*—of kinds quite new to me; my employer had no understanding of architecture and an engineer's contempt for architects; I was burdened by interferences, and by the requirements of a fatuous organization that tripped me up at every turn and enormously increased the labour of preparing contract particulars and getting the work done; the "Yard Foreman," who had previously been in charge of maintenance and minor alterations, regarded me with implacable hatred as the usurper of his authority and with contempt for my ignorance of those practical matters in which, alone, he was informed; while the Works Manager viewed my advent with intense resentment since he would in future no longer be the chief person consulted in building proposals, and also scorned me for not being an engineer—he himself being unconscious of any other field of attainment.

Both these men openly showed their hostility and made things as difficult for me as they dared; I was thrown entirely on my own resources, without a friend or even an acquaintance—much less anyone who could help me to resolve my many doubts; the Surveyor of the Urban District Council made compliances with the bylaws as difficult for me as he could, and was openly insulting in his manner and by innuendoes implying contempt for my standing and my pretensions, when I went to see him—as he frequently compelled me to do. The intense bitterness of the dispossessed architect—a local practitioner with a surveyor's qualifications—was so painful to me that there were times when the realization of it depressed the heart so that its beat became thick and heavy within me; I found my social standing reduced to that of "a young man at the Steel Works," and myself identified with the swarm of accounting and secretarial clerks who infested the offices and streamed in and out of the front gates, at appointed hours, like ants; and, finally, the authority which the law gives the architect to command the obedience and enforce the respect of contractors was, in great part, stripped from me, so that I had to go forth against the hosts of Philistine (commercial) contractors, like David arrayed with a pea-shooter—a weapon whose terror lies only in its threat.

These, then, were the main ingredients of my gruel; but unless I enlarge on the nature of those ingredients and explain how they came to be components of my bowl, my predicament will be little understood. Such a recital will constitute a narrative of unusual experiences, but the reader must not forget what kind of person it was who suffered them; and must remember, also, that I was not at the time, aware, as I now am, how great my unhappiness was; for I supposed my sufferings were the common lot of architects and that I had to make the best of them.

No one is better aware than I am how much my own defects in character contributed to my distresses and increased my difficulties; at the same time my shortcomings were in kind, if not in degree, those that belong to all men; and since I won through and, however precariously, made a success, the tribulation by which that success was reached has claims on sympathy and is a direction post to those who may find themselves circumstanced as I was. I will, therefore, make the constituents of my gruel—enumerated above—the text of my immediate narrative.

The building operations I found I was required to conduct, when ten days after my interview with Mr. Stevenson and his co-directors I deposited myself and most of my possessions at Nollingborough (Garston harbouring my non-technical books and bits of old furniture at his office or "diggings"), extended from innumerable small additions, alterations, and emendations of defects and oversights—which were carried out by the firm's own building staff—to the extension of the machine shops by an area of 240 ft. by 190 ft.; and included offices for myself, with building yard and shops; a sumptuous engine, transformer and accumulator house; additions to the main offices, extensions of foundry, new pattern stores, core ovens, latrines, lodges for cooling water, a four-foot sewer a hundred yards long to compromise an easement, revision of lay-out of sidings, and much else besides, not to mention two furnace chimneys 120 and 90 ft. high. These works I proceeded to put in hand—not, of

course, all at once, but in the kind of order which may be described as "nearly everything before nearly everything else"; and went to the offices of the company one morning, equipped with a shirt and a box of instruments, to do it.

The terms of my engagement Mr. Stevenson had proposed were a salary of £250 a year, payable monthly, and "a bonus, Mr. Whistlow, of such an amount and paid at such times as the directors may deem appropriate to the results"; and as the salary was twice what I had previously earned and more than I thought I was worth, I had had no hesitation in accepting it, for Mr. Stevenson's shrewd business instincts had led him to speak lightly of the work in view. However, I think that—considering my inexperience, and bearing in mind the humble character of most of the work, and my dependence on the firm's engineers, and the company's (virtual) acceptance of responsibility for the Resident Architect's negligence—my services were adequately paid; for my salary rose to £300 and £350 in the succeeding two years, in which time I had also received £700 in two bonuses, after being first asked, very handsomely, by the chairman at board meetings, whether the amounts proposed met my views.

Living in lodgings, as I did, I was able to spend much more than formerly and yet put by very nearly a thousand pounds before my engagement came to an end on the heels of my thirty-first birthday. I do not regret that—as a result of inflammatory contact with engineers—much of this money was afterwards squandered by riotous indulgence in the newly-invented motor-car.

Within an hour of my arrival at Albion Works my troubles began. In a long interview Mr. Stevenson first told me that I might have some trouble with Piggott, the Yard Foreman (who was to be appointed my foreman of works), as the man's responsibilities had gradually grown with the expansion of the firm till he was too big for his boots, and he also had a very ugly temper; and he then seriously warned me that it would be necessary for me to use great tact in "conferring"—he emphasized the word—with Mr. Beverly Kent, the Works Manager.

"I will take you myself and introduce you to Mr. Beverly Kent," he said, in a hushed manner, giving me his beard as he consoled himself under the chin.

"Is Mr. Kent . . . ?" I began.

"Mr. *Beverly* Kent," he corrected me; and in answer to my completed question told me, No; that I would not take instructions from Mr. Beverly Kent, but only from himself or his co-directors—"but tact, Mr. Whistlow, will be necessary. It will be advisable for you—at any rate at first—to note Mr. Beverly Kent's instructions and report to the Directors through the Secretary with plans and sketches in duplicate for the Board's approval or—er—otherwise. Your instructions will come to you in the form of extracts from the board's minutes through the Secretary. There is a special form of acknowledgment to be made of all such instructions—also in duplicate: we have a system of duplication or quadruplication we employ, and an appropriate distinctive colour for your inter-departmental stationery will have to be arranged—but all these matters will be explained to you by Mr. Foulkes, and I need not delay you with a resume of them."

Delay there was, however, when Mr. Stevenson unmasked a regulation which was to be a thorn in my side and an impediment to my usefulness all the years I acted for him. He told me that my letters would be written and signed by the Secretary.

"But, sir, Mr. Foulkes will not understand what he is signing!"

"—— From drafts or information you will supply. Permit me to hint to you, Mr. Whistlow, that we are not entirely ignorant of our business! Mr. Foulkes is accustomed to indite correspondence dealing with matters of accountancy or engineering with which he is not technically acquainted. Our system, you will find, safeguards errors and secures that the firm's correspondence conforms to a certain standard of courtesy and elegance. The Directors do not allow Tom, Dick and Harry to represent them in correspondence with our customers," he concluded, growing a little pink.

I had already noted that standard of elegance and my alarm was increased.

"Yes, but there is another objection, sir," I broke out.

"I am not inviting your objections, Mr. Whistlow. Incoming letters will be opened and registered, and outgoing written and signed by the Secretary. You will receive carbon duplicates for your files, and you can, if you wish, see the carbons before the letters are press-copied and dispatched. All our letters are press-copied in the Sub-Secretarial Branch, for, as you are of course aware, a carbon copy is not accepted as evidence in a court of law."

"Yes: but how will it be possible for me to make contracts, sir?"

"How possible! I will thank you to kindly explain yourself, Mr. Whistlow."

"Well, sir, am I not your architect?"

"You are appointed to the situation of Resident Architect to the Eureka Plough Company—if that is what you wish to tell me."

"I do not understand, sir, how I shall be able to act as your architect and make contracts if the contractors are to receive instructions from *you*."

"From me!"

"I mean from the Secretary—on behalf of the Company."

"Mr. Whistlow, you surely will not be surprised to hear that we enter into contracts nearly every day of the week. Our standing contracts for our Rockingham Reapbinder *alone*——"

"But——"

"——You interrupt me—*alone* amounted, yesterday, to considerably over *two hundred thousand pounds!*"

"Surely, sir, that is a totally different matter."

"It is *not* a different matter."

"Yes, I assure you: an architect fills the position of Arbitrator. He has to hold the balance between the contractor and the building owner and to draw certificates. The very basis of a building contract is that the architect shall interpret the drawings and specification and determine what can be justly required of the contractor and the building owner. The building owner has no more power to decide what is due under the contract than the contractor has." It was my turn to grow pink, and I did so—not, however, from annoyance, but from fervour.

Mr. Stevenson was now compelled to sit up and take notice. This he did with a considerable display of irritation and disturbance of mind, and it has always seemed to me a remarkable instance of the wide general ignorance of an architect's functions that an experienced man of affairs like Mr. Stevenson, who had actually employed an architect to conduct extensive building operations for him, should be unaware of an architect's fundamental duties. It was clear from the way he fidgeted and pulled at his fingers that he conceded the necessary authority for me to carry on in the post to which he had appointed me, with great reluctance: we wrangled over the matter for a quarter of an hour before, with some show of asperity, he forcibly closed the discussion; and the most that I could secure for myself—and, of course, also for *him*—was that I should write and sign my own letters in the first person, although they were still to be reviewed and posted by the Secretary who would also open and register letters addressed to me. I was to use the Company's headed letter-paper surcharged "Architect's Department"—which, however, I afterwards got altered to "Architect"—so that though my contracts attached me as architect, that attachment was by the most slender of threads. As a consequence, I came to hear of a contractor who spoke of me as "in the Company's pocket," and was to learn that Mr. Stevenson himself boasted "we have our architect on a string." This slight on a faithful servant—for such indeed I was—I have never quite forgiven him.

I hope he remembered the jibe for a year or two after I had cut that string, for I once very neatly rammed it back into his throat—as I shall have to tell.

The result of all this was that I never from first to last—with one conspicuous exception — enjoyed that confidence and respect from contractors which, in common with other architects, has always, since those days, been accorded to me. The contractors who were equipped to give low tenders for the kind of building I was concerned with, were not of the true breed of builders at all; but were usually financial organizers of building, whose commercial instincts were unredeemed by the least consciousness of craft traditions or of the self-respect that is associated with them. Thanks to Mr. Stevenson's discrediting of my standing, the underlings of these people assumed that I was a mere commercial trafficker like themselves; I could only enforce my decisions by weight of insistence and by endless chaffering and argument and bickering; they often became cheeky and personal, so that I only avoided open quarrels by ignoring their impudence, and they would then go off with an insolent parade of being aggrieved. Important men—directors, managers and "our Mr." this, that and the other—would come to see me; crowding into my private office in groups, to try by cajolery, or bluff, or deceitful subterfuge, or a demeanour of ominous threatening gloom, to jump me into certifying larger sums than they were entitled to, or into accepting slates, bricks, scantlings or finishings inferior to what was specified; and would finally leave me with skilfully-conveyed hints that, if I did not change my mind, awkward things would happen.

The muddled wording of many of the letters I received often disguised cunning ambiguities devised to trap me into an admission or consent, which would force me to surrender the company's interests or retire from a position I had taken. I can say with some pride that I was never in this way caught out in any material matter; but the ever-present danger compelled me not merely to read the letters I received, but to test them for hidden meanings; and also led me to the habit of stating in clear words, in my replies, what I had understood their purport to be. Finally, in my simplicity, I accidentally invited a bribe, and was instantly bribed, although—as I shall have to tell—I was unaware of my own guilt, and have to thank Providence that it was I who first discovered it, and not another.

It is not, however, to be supposed that my life was made up of such experiences as these, or that they were usual, or even of frequent occurrence; but they belonged to the world in which I found myself, and the fact that such things happened, and the ever-present possibility of their happening, discoloured my life and, joined with other miseries, taxed the resilience of my youthful spirit severely. I am not ashamed to say that I look back upon myself over the long intervening years, with compassionate feelings.

After Mr. Stevenson had, in the first hour of my employment, loaded me with disabilities which made it almost impossible for me to carry out the duties I was engaged to perform, he seemed to think that he had wasted enough time—for the wasting of time so much engaged him that, though he sat up till one o'clock in the morning to waste his own, he employed a personal secretary, most appropriately named Lolly, to help him waste other people's—and he took me off to introduce me to the Works Manager, Mr. Beverly Kent.

It was first necessary to *find* Beverly Kent. This we speedily did, for Mr. Stevenson's inquiries for him as he walked through the shops were seconded by messengers who left their tools and darted off in quest of the Works Manager; and, since the Managing Director continued his own search through the humming bays of the machine shop—the while he expounded his extension projects—the Works Manager, with hounds still on his trail, was soon also hunting the Managing Director, and collision was thus happily effected in little more than a quarter of an hour.

It was, of course, necessary for Beverly Kent to be continually about the works, and no doubt impossible for him to leave word at his office where he was to be found; but he never, as he might have done, dropped a hint of where he was going when he left one part of the buildings for another, and he had no fixed time when he could be seen in his office, so that the many officials who frequently had need to confer with him were obliged to track him down, and without the help of the messengers a Director could command. I calculated that during my first year I spent six full weeks of my working time searching for Beverly Kent through the works—for the delicacy of our relations during those early months forbade my approaching him except by paying court in person; and I also calculated that the total time wasted by this muddling—which could have been ended merely by the employment of a boy-orderly at eight shillings a week to carry a flag, and telephone up to the office from time to time—cost the company not less than two thousand pounds a year. When I noticed my own clerks spending time in pursuit of Piggott, my Foreman of Works, I soon found a way to make it unnecessary.

Mr. Beverly Kent was a burly man of forty, with a round shaven face, dark hair and the dingy skin and muddy-brown eye that marks a plethoric temperament. His general education was of the kind that may be built up by a sedulous study of *Tit-Bits*, and was a great obstacle to intelligence—clogging his mind as glue might the works of a clock; but he had an unrivalled understanding of machine tools and their output, and was well known as an authority on the subject. I can see him now, as at the moment I first clapped eyes on him.

Mr. Stevenson was speaking to me when, with an unthinking movement—the impulse of a protective instinct which I have experienced many times in my life—I turned completely about and faced full on this man who was advancing down the centre of the bay with his eyes fixed on me. He cast them down, and then looked aside, when he met my gaze; but I knew instantly that he had discerned who the stranger was and that the enmity he had focussed upon my unconscious back had moved me to spin about to defend myself. A few seconds later he came up on the Managing Director's blind side, and said firmly:

"Good morning, Mr. Steffinson Stevenson."

"Oh! Good morning. Er—ahem—just a word"—and Mr. Stevenson took hold of his arm above the elbow and led him slowly up the bay, whispering him—solicitously, as I thought. Then he turned, gave me a chin-salute and signalled me to follow. Mr. Stevenson appeared to be afraid of his Works Manager.

NEXT WEEK—XIII: AN UP-HILL FIGHT

The previous instalments appeared as follows:

May 27. i: I am Articled
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes."
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.
July 15. viii: Joe Richards: Foreman.
July 22. ix: Trials of a Clerk of Works.
July 29. x: A New Venture.
Aug. 5. xi: The Resident Architect.

Holiday Sketches Prize Competitions

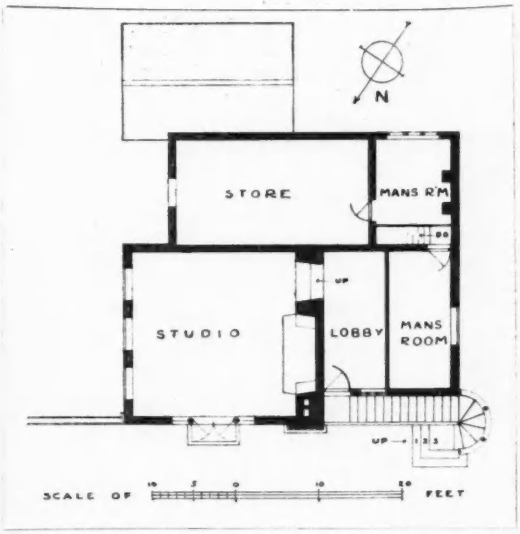
Entries close for the second or August competition—that for sketches made during July of the present year—on Monday next, August 17; for rules, see page 180 of the issue for August 5. Motto labels, the use of which is obligatory, are printed on page xl of the present number.

There will be a third and final competition closing in mid-September.

Awards in the first competition will be found on page 214 of this issue.

STUDIO AT BLACKHILL, HEREFORDSHIRE

DESIGNED BY OLIVER HILL



A general view, taken from the north west; and the plan of Sir Barry Jackson's studio at Blackhill. Situated on a sloping site, the windows, particularly that on the north-west front, afford magnificent views of the surrounding district, which, as will be noted from the illustrations on this page, is thickly timbered.

A view from the north : the balcony window on the right and the three semicircular windows on the left light the studio. Part of the exterior staircase leading up to the entrance lobby is seen on the extreme right of the illustration.

Looking along the main front, which is approximately 40 ft. long. The walls are of textured concrete, coloured afterwards; and the roof is covered with slates. The balustrading of the concrete stairs is executed in wood.

LETTERS FROM READERS

The I.A.A.S.

SIR,—As your correspondent, Mr. William Davidson, is sufficiently acquainted with this Association to know the name of its secretary, he *should* know its address. I cannot understand, therefore, why, assuming he is a genuine seeker after information, he did not address his inquiry in the ordinary way through the post, instead of using your correspondence columns as a means of communication with the writer. (But perhaps his intentions are less innocent than he would have them appear ?)

However, as your correspondent omits to mention his address, and, as I have not the pleasure of his acquaintanceship, I am compelled to seek your indulgence and the hospitality of your columns in order to convey my reply.

With regard to the law case mentioned by your correspondent, I understand the case is *sub judice*; it would, therefore, not be proper for me to make observations on it. Nevertheless, I believe it is not a unique proceeding for a master-builder to rise to eminence as an architect, and, certainly, many most competent architects have learned the principles of their art and craft, in the shops.

But, to get back to Mr. Davidson's first question : Members of this Association, before election, have to sign a declaration witnessed by a Justice of the Peace, commissioner of oaths, or a like responsible person, stating that he (the applicant) is practising as an architect, or as a surveyor, and that he is " in no way connected with or engaged by a builder or firm of builders."

With regard to the second question : the proportion of architect members of the I.A.A.S. who have been articled with or trained by architects is very large, and it would be safe to say that the percentage is at least equal to that of the senior body.

We now come to the third question. I believe there are a large number of architects, not confined to any particular professional body, who do a bit of estate agency work, and it is no reflection on that distinguished society, the Chartered Surveyors' Institution, to opine that the majority of its members are land and estate agents, and that a very large number are auctioneers. Even in that august body, the R.I.B.A., may be found land and estate agents; rating surveyors and valuers, borough engineers, municipal surveyors, technical assistants, and, perhaps, a few sanitary inspectors also. As Mr. Davidson is a seeker after knowledge he may be interested to hear that, in the Architects' (Registration) Bill, the R.I.B.A. sought to include in the personnel of the Admission Committee, auctioneers, house and estate agents, land agents and factors, landed property agents, valuers, and rating surveyors.

Mr. Davidson may be led to ask " How many auctioneers are there on the register of I.A.A.S. members ? " I will anticipate this question by a reply. I have been through the Register and find that there are twelve members only who are known to hold or to have held licences. These are all *surveyor* members who have satisfied my Council in regard to their qualifications in that profession. The majority of these members were admitted in the early days of the Association; even so, the percentage (in a membership of nearly 2,000) is negligible.

Should Mr. Davidson require any further information, and will call at this institution, he will be received with the courtesy and given the assistance invariably accorded to *bona fide* inquirers, and this invitation is extended to you, Sir, and any of your readers.

G. B. J. ATHOE
(SECRETARY, INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

SIR,—I have to thank Mr. William Horsman for his reply to my letter. Surely a profession which dates back, at least, to the days of Noah, who built the first travelling menagerie, requires no specially modern support to its dignity. I hope the Royal Institute will note Mr. Horsman's statement that a builder with " sympathetic instinct for design," if he forsakes the trowel for the T square, makes a far better architect than an academically-trained man. I am often asked by anxious parents regarding the best training for pupils, so now I will know to direct them in future to the nearest mason's yard.

I replied to Major Athoe's letter of July 8 as I thought answers to my questions would be of considerable interest to the profession generally. I do not know exactly what Mr. Horsman means when he speaks of " a senior architectural degree," but if he refers to the R.I.B.A. I cannot think that its Council would permit a house agent or estate factor to remain on its register.

I am glad to learn that the I.A.A.S. is watching so carefully the interests of the younger and older architects, but what about the middle-aged ? I am suspicious of all official bodies for obvious reasons, one of which is that a candidate has to sign a declaration not to adopt any intelligent methods of securing commissions.

I now also have to thank Major Athoe for his careful and detailed reply (published above—ED., A.J.) to my letter of July 22. For some time back I have seen letters over his name in various distinguished architectural journals. One special feature of these letters has been that they appeared to be either demanding an explanation or an apology from someone who appears to have made slighting remarks about the I.A.A.S. The latest I noted was an apology from a judge for calling the I.A.A.S. a mushroom. If the gallant major had wished to communicate with me direct, he might have adopted the usual method, which is universally adopted by journalist correspondents, viz., sent the letter on to you, Sir, to be redirected to me.

His explanations are, however, much too valuable to be treated in this secret fashion, and I am sure the profession owes him a debt of gratitude for stating so clearly the constitution of the I.A.A.S. From Major Athoe's letter it would appear that the terms of the constitution are rather loosely worded. Why I should not be considered a *bona fide* inquirer I cannot conceive. I belong to no political party and have no axe to grind.

Let me now deal with the apparent contradictions in Major Athoe's reply. He states : " I believe it is not unique for a builder to rise to eminence as an architect." Note the " I believe." He appears to be only guessing. The strange thing is that later on he states that " Members of this Association, before election, have to sign a declaration witnessed by a Justice of the Peace; . . . or a like responsible person, stating that he . . . is in no way connected with or engaged by a firm of builders." Comment is needless.

Again, " the proportion of architect members of the I.A.A.S. who have been articled with or trained by architects is very large, and it would be safe to say [note "safe to say"] that the percentage is at least equal to that of the senior body." This is not even hearsay evidence. Am I to understand that the I.A.A.S. is a junior section of the R.I.B.A. ?

His answer to the third question I would ask the Council of the R.I.B.A. to look into. If what he says is accurate I can see many resignations from that august body in the near future. Only one item I would emphasize : " and, perhaps, a few sanitary inspectors also." Note the " perhaps." Neither documentary, hearsay nor any other kind of evidence, merely imagination. I have read all the Press notices relating to the Registration Bill, and doubt very much if the R.I.B.A. sought to include auctioneers and house agents in the personnel of the Admission Committee. I can see the Council of the R.I.B.A. demanding an apology from the gallant major in the near future.

Major Athoe's letter reads to me rather like a sneer at the R.I.B.A., and certainly he has made it clear that the I.A.A.S. is composed of auctioneers, house agents, estate agents, land agents, factors, landed property agents, valuers, surveyors, sanitary inspectors AND architects. What power such an Incorporation could possibly possess to protect the interests of architecture as a profession or an architect as an individual it is difficult to conceive.

WILLIAM DAVIDSON

SIR,—I do not wish to enter any private controversy, but cannot help feeling that the statements made by Mr. Horsman in your last issue concerning the association mentioned above are somewhat misleading.

In the first place, no person would grudge a builder, gifted in design and who had had a good architectural training, his place in the profession, provided that he really would be prepared to give up his trowel for the pencil, and not to use them alternately; on the other hand, many of your readers will no doubt agree that we are suffering from much poor work produced by builders, who have, presumably, and without proper justification, imagined that they possessed this sympathetic instinct for design.

Again, the policy of watching the just interests of young and older architects alike is very laudable, but equally important to an association purporting to give professional qualifications should be a policy of protecting the public from incompetent practitioners, such as those who have not even had the fair architectural education mentioned by Mr. Horsman.

J. N. AYLWIN

Cavity Walls

SIR,—In building for a *minimum* duration of a century, we are catering for a period during which abnormal weather conditions will have their say and cavity walls will, at times, be tested very severely.

I have in mind 1903, when exposed houses were battered continuously for periods of forty-eight hours or more by driving rains, and when I had to deal with a recently-built house, in which the cavity walls of sandfaced bricks started from a concrete foundation only 12 ins. below the ground-floor level. The bottoms of the cavities became sheer tanks, and, on the sides most exposed to the weather, damp rose to a height of over 6 ins. above the tops of the skirtings. (Incidentally, in one chimney the rain penetrated to such an extent that it completely logged the brickwork, circumvented the damp-proof course, and ran out through the copper door two floors below.)

Hollow walls, I then concluded, should always start with a quite clear cavity from the foundation concrete, which should be at a level not less than 2 ft. to 2 ft. 6 ins. below the ground-floor line. Fortunately, such weather conditions as those of 1903 are unusual, but they may occur many times in the life of any durable house, and should be the criteria by which we rule the construction of our outer walls.

W. BEESTON

Lowest Tenders

SIR,—Whilst I agree that an onlooker usually sees more of a game than the contestants, it is generally of little use to pass comments unless one knows the game.

"Man of Affairs" (see page 116 of the JOURNAL for July 22) speaks rather as a layman, but I am inclined in general to agree with his views, and I risk the wrath of the majority of your correspondents whose moral code binds them at all costs to advise the acceptance of the lowest tender.

There are still a number of intelligent and capable men in all trades who cannot help but make an excellent job of any piece of work which is placed in their hands, and actually take a pride in their workmanship.

The capable and really reliable builder who encourages the good craftsman stands out more in the country and county towns, and if the price of his work is higher (within a reasonable limit) than others whose eyes are mainly on finance, it should not therefore be debarred from acceptance.

Most people are very tired of hearing that "things are not what they were," but there is a considerable amount of poor workmanship in the building trade, where the scramble to cut prices reacts on the quality of the work. Why, therefore, support the builder who skins his price and trusts to careless workmanship to gain his profit?

I am quite prepared to be met with the plea that all tenders, based on a contract under the control of an architect, are to be to his satisfaction. Theoretically this places the builders selected for tender on the same plane. But in practical fact I consider it a mistaken view, for it must be admitted that some firms do stand out for the superlative quality of their work.

The architect, to use the term of some of your correspondents, should be morally bound to advise the acceptance of the tender from which the client will get the better value for his money, and this is not always the lowest.

W. A. DOWNE

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Bills Receive Royal Assent

BEFORE Parliament rose for the Summer Recess, the Royal Assent was given to the Architects' (Registration) Act, the Housing (Rural Authorities) Act, and the London Squares Preservation Act.

Rural Housing Act Committee

Mr. Greenwood announced that the composition of the Advisory Committee under the New Rural Housing Act would be as follows:—Sir Tudor Walters (Chairman), Sir George Barstow, Sir Valentine Crittall, Sir Theodore Chambers, Sir J. Walker Smith, Sir Seymour Williams and Messrs. E. W. Cemlyn-Jones, R. Coppock, E. G. Gooch, Peter Hughes-Griffiths and Alan Rae Smith.

Rural Housing Act Committee: Scotland

Mr. Adamson said that the names of the persons whom it was proposed to appoint as members of the Committee for Scotland under the same Act were as follows:—Sir William E. Whyte (Chairman), Provost A. M. MacEwen, Miss Bella Jobson, Messrs. Alexander Robb, James C. Cossford, John Train, M.P., and Adam McKinlay, M.P.

Rent Restrictions Acts

Major Graham Pole asked the Minister of Health whether he could state what action the Government proposed to take in regard to the Rent Restrictions Acts.

Mr. Greenwood said it was the intention of the Government to propose to Parliament in due course to extend the existing Acts by means of the Expiring Laws Continuance Act.

Competition Result

The awards in the International Aluminium Competition for suggestions designed to develop the use of aluminium and its alloys have been made as follows:

First prize, 25,000 French francs, Mr. Constantin Szmukler (France), for a contribution on the use of aluminium in leather dressing and tanning.

Second prize, 25,000 French francs, divided equally between Dr. H. Hampel, of Germany, and Mr. de Haes, of Belgium, for two entries relating to the use of aluminium in radiators for central heating systems.

The special prize of 50,000 francs has not been awarded, the judges being of the opinion that no suggestion made was of sufficient importance and exceptional novelty to justify this award.

Approximately 1,000 persons approached the International Aluminium Bureau for information on the competition, and eventually 291 entries were submitted to the judges. For the most part it is stated these entries were highly meritorious and showed careful study of the properties of the light metals.

THE SKETCH CLUB

THIRTY-FIFTH SESSION

JULY HOLIDAY SKETCHES — *COMPETITION: PRIZE AWARDS*

FIRST PRIZE: D. E. Harrington.
Somerset House, London.
(Pen and sepia wash: 18"×6¼")

THIS session represents some fruits of the first of this year's three Holiday Sketches Competitions. In accordance with the rules the awards are announced, and the prize-winning sketches are also reproduced on this page.

After careful consideration of nearly forty drawings, submitted by eleven competitors, there was no hesitation in placing first "Somerset House, London," sent in by "Conté." On opening the sealed declaration the sender was revealed as:

D. E. HARRINGTON,
47 Marmora Road,
Honor Oak, S.E.22,

who therefore takes the prize of ten guineas.

To select a subject for the second prize of five guineas was not quite so easy, but "Wurzle's" watercolour of "The Old Bridge, Sospel, France," was eventually selected. He is:

G. I. C. HIGHET,
Verrieford, Cleardown,
Woking, Surrey.

"Sirod" (G. McKinlay) sent in some attractive pen-and-ink work, which is adjudged commendable.

All competitors are to be thanked for their support and perseverance in the face of the unfavourable June weather conditions—conditions which did not, unfortunately, improve during July. It should be noted that the August competition closes on August 17.

It is proposed to publish a further selection of the July Competition sketches in the near future.

SECOND PRIZE: G. I. C. Highet.
The Old Bridge, Sospel, France.
(Watercolour: 13¼"×8¼")

guineas.

To select a subject for the second prize of

The Old Bridge, Sospel, France.
(Watercolour : 13½″ × 8½″)

By D. E. Harrington.]

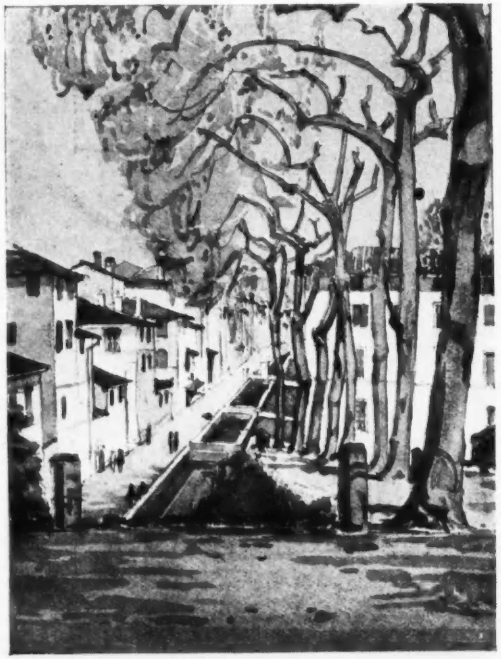
St. Paul's.

(Pen and ink : 15″ × 9″)

By G. I. C. Highet.]

Ravenna.

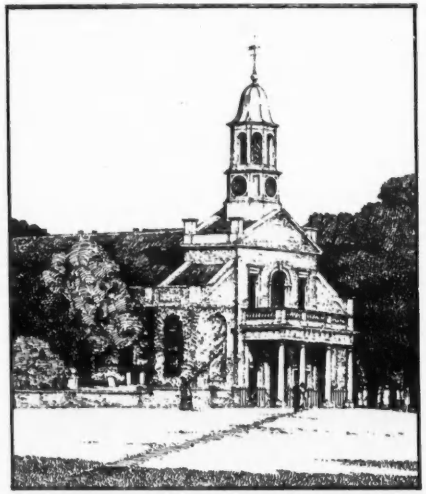
(Pencil : 8¾″ × 6¼″)



By G. I. C. Highet.]

The Via del fosse, Lucca, Italy, from the Ramparts.

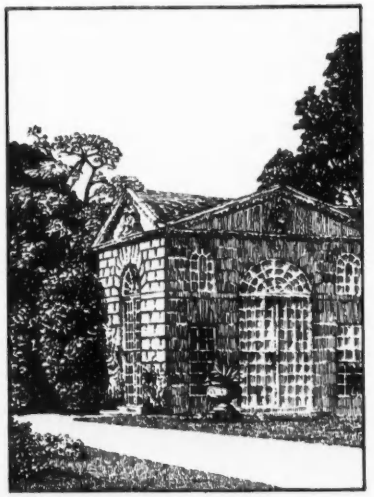
(Watercolour : 6¾″ × 9″)



[*By G. McKinlay.*

Church on Kew Green.

(Pen and ink : 7¼″ × 9″)



By G. McKinlay.]

The Orangery, Kew Gardens

(Pen and ink : 6¼″ × 8½″)

[*By G. I. C. Highet.*

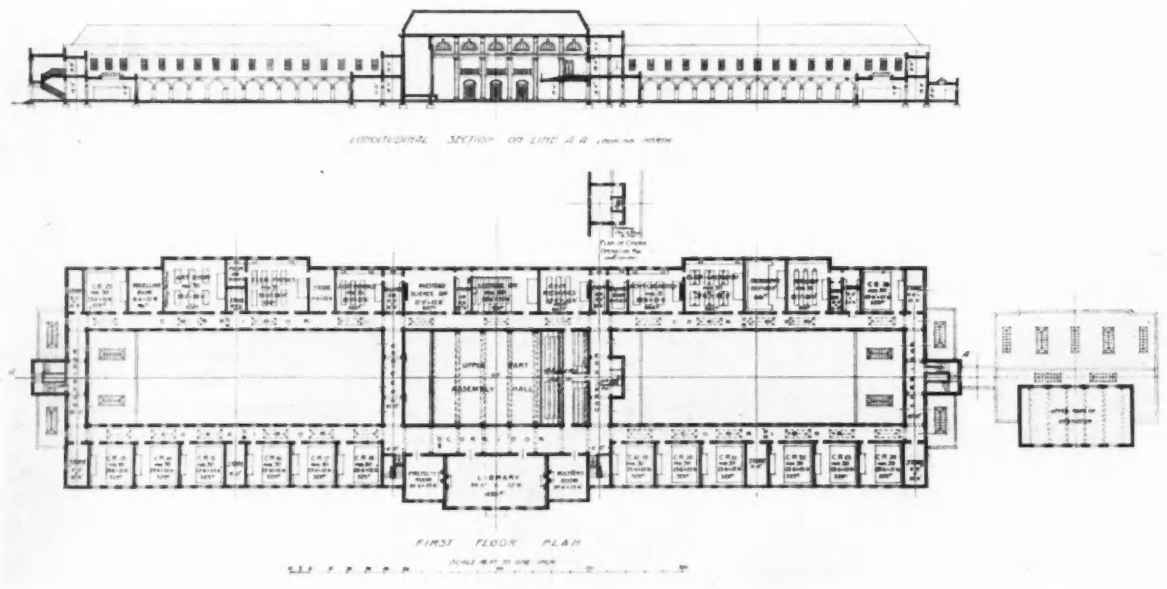
The Market Place, Siena, Italy, with Tower of Palazzo Pubblico.

(Watercolour : 10¾″ × 14½″)

SOUTHAMPTON COMPETITION AWARD

The Designs placed First for the King Edward VI School

The block plan; and elevations; with cross-sections, etc.



[*Tyndall and Peebles, Architects.*

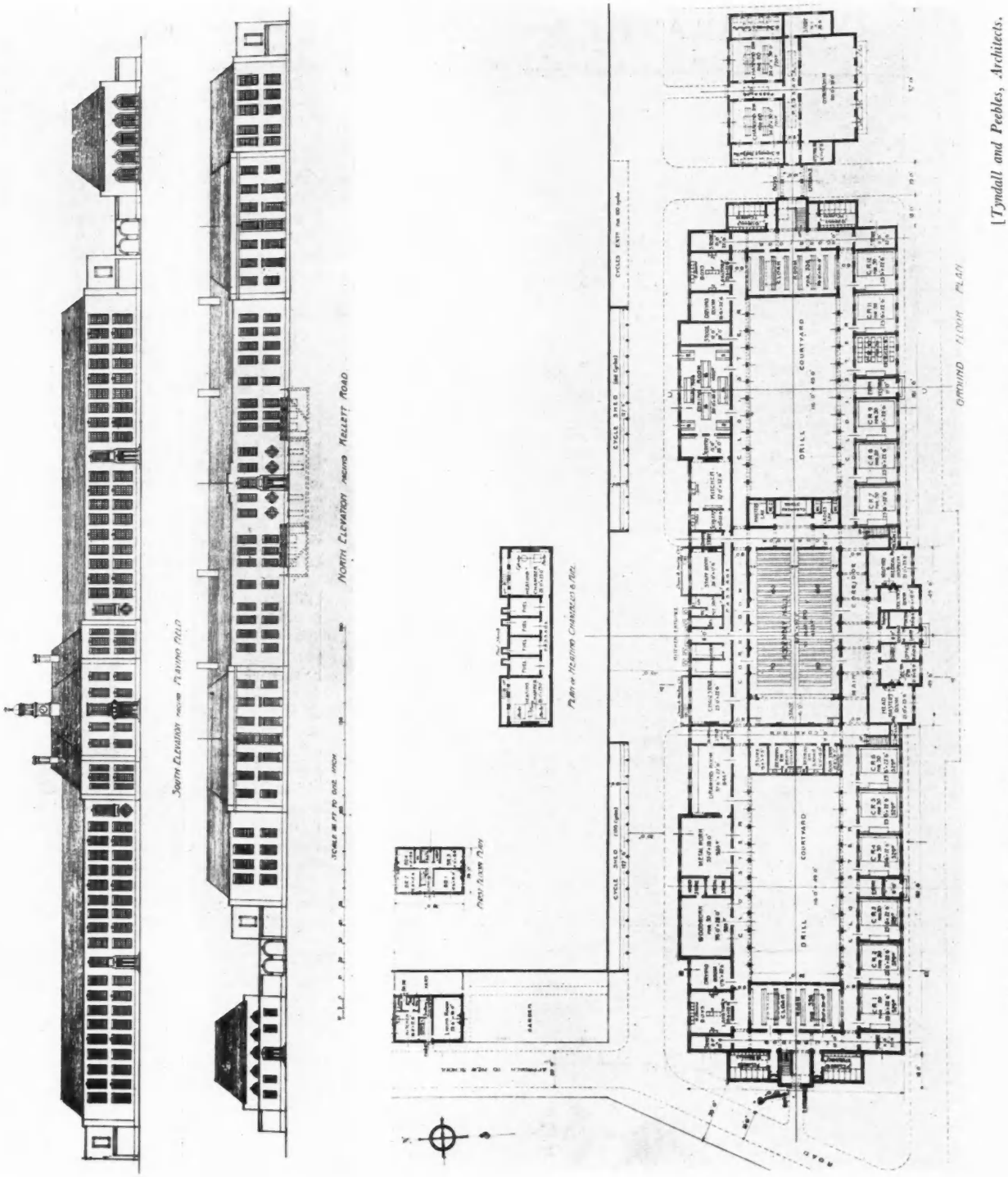
Longitudinal section on centre-line; and plan of the first floor.

MR. SYDNEY TATCHELL, V.-P. R.I.B.A., the assessor, has made the awards as follows: First premium (£150), Tyndall and Peebles, Westminster, S.W.1; second premium (£100), Gray, Evans and Crossley, Liverpool; third premium (£50), Unsworth and Goulder, Strand, W.C.2.

Following are extracts from his report:

In many cases the designers have failed to appreciate the peculiar features of the site and to recognize that so far as the main façade of the building is concerned that facing south will alone be seen from the public road. The intention of the promoters—clearly laid down in the particulars—that the new school should be erected in the N.W. corner of the site, has also been completely ignored by several.

Some competitors have spoilt what otherwise is a satisfactory scheme by insisting on an approach road across the playing field, thereby materially



The south and north elevations; and ground plan, showing also cycle sheds and school-keeper's lodge. [*Tyndall and Peebles, Architects.*

reducing its utility. The placing of the assembly hall at the west end has in many designs proved a handicap; likewise spaces devoted to quadrangles.

The planning of sanitary accommodation has in other cases been somewhat unfortunate; and in the grouping of windows the importance of even lighting of the rooms within has in some designs been sacrificed to elevational effect. Some competitors in their desire to introduce interesting projecting wings have overlooked the rooms which, as a consequence, would be for some hours of the day placed in shadow.

In awarding the first premium I have been impressed by the simple directness of the plan and the resulting attractiveness and dignity of the elevations. The several departments of the school are well placed as regards aspect and in their relation to one another; the corridors are wide and well lighted and ventilated; they are direct and are served by well-placed staircases. The assembly hall is suitably planned in the centre of the main structure and readily accessible by pupils and also by visitors on special occasions. Although the gymnasium encroaches somewhat towards the east, its excellent planning justifies the sacrifice of ground at this end.

LITERATURE

CITY PLANNING TO DATE

ROME was not built in a day, thank goodness! and the modern city planner is not likely even to grasp his whole problem in a day. As Professor Lohmann explains in this very thorough book, the good plan must satisfy an overwhelming number of requirements. "Scattered excellences have not as yet been combined into a single picture." The programme has not only variety but fresh items are added continually with industrial and social changes. Perhaps it is the urgency due to the accumulation of such new difficulties which has caused the professor to deal scantily with the prime matter of site. Our new cities are generally handicapped by unworthy sites. But as the glory and care of a city is inspired by its citizens' affection, aroused by beautiful views of it, there should be some high place whence the city as a whole can be seen, as Jerusalem from Olivet, and London from Hampstead, and Norwich from Mousehold Heath. A mere two-bob glimpse of a New York from a Woolworth's tower is not the same thing as contemplation.

Professor Lohmann brings his readers by an historical résumé of ancient and mediæval examples to American city-planning. Today the first step is the survey of the city as it exists, including the surrounding country. Data of the types and location of industries, residences, public buildings, of the means and volume of transport, and of recreational facilities, are collected. The next step is the main plan to a small scale, in order to show main roads and streets and main zoning subdivisions. The third step is the series of enlarged plans of the subdivisions. The ideal layout of a modern city is like a spider's web, and has radiating lines and concentric arteries to connect them; but the residential blocks so formed should not be cut through by further streets—rather they should be served by culs-de-sac and kept free of through traffic. Thus, the interest of the pedestrian is served, children are safeguarded from motors, and noise is kept at a distance. The acreage of parks and recreation grounds must be worked out in reference to population, and the isolated parks should be linked by broad parkways. Cities of the grid-iron type, which have become over-saturated with population, are most difficult to deal with. Detroit and St. Louis have tried such experiments as the "raised superhighway" for main traffic, with subsidiary roads beneath; two- and three-tier traffic-ways are talked of. Decentralization seems the only cure, and this leads to the regional plan, embracing many square miles of surrounding country. The decentralization of industry may be accomplished by an enormous increase in electric power. Dwellings must be re-centralized within reasonable distance of the factories, parks and recreation grounds will be planned to separate the new city into zones and from its neighbouring cities. "There is a possibility that by the use of an imagination both practical and courageous, some future planner may accomplish such a result." P. M. ST.

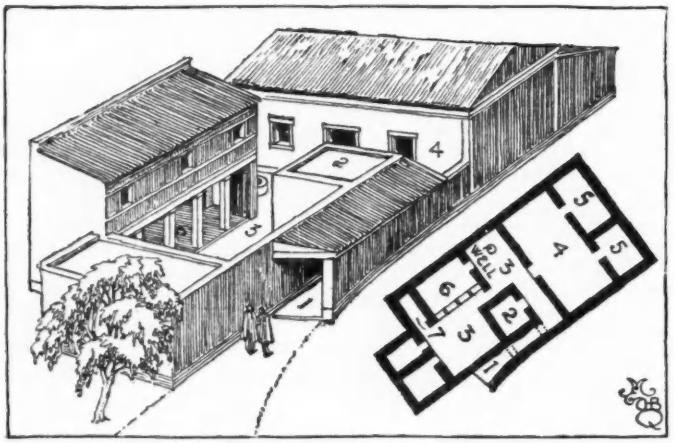
The Principles of City Planning. By K. B. Lohmann. New York: McGraw Hill Publishing Co., Ltd. Price 20s. net.

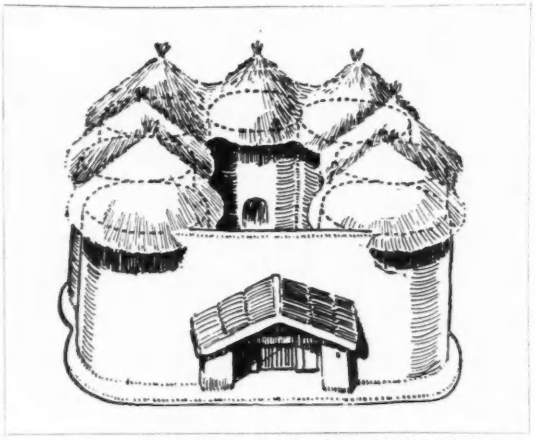
THE DARK AGES

IN their first volume in the present series—*Everyday Life in Homeric Greece* (reviewed in this JOURNAL for May 6, 1931—ED. A.J.)—the authors, Mr. and Mrs. Quennell, contrived to reconstruct a solid background of social history to the romance and poetry of a culture that was to become the basis of our Western civilization. In their second volume, just published, they approach a zone of more concrete fact and more precise history.

Taking as their starting-point the return of Odysseus to Penelope of Ithaca, the authors lead us through the troubled Dark Age of the Dorian invasion, and show us how the original Greek stock settled and preserved its culture in Æolia and Ionia, across the Ægean Sea. We see how the invaders thrived in the peninsula, and how in time they themselves absorbed influences from the older culture; how colonies were formed in outlying territories; and how, in the year 176, the Greeks of the homeland and colonies united to hold a festival together at Olympia. The final phase of the story is concerned with the Persian Wars, which resulted with the utter defeat of the invaders at Salamis. This victory not only consolidated the power of the Greek nation, but also brought it to the threshold of the Classical Age.

After an introductory chapter, which recapitulates the facts of history as we know them from Herodotus, we explore the everyday life and everyday things which formed their background. The book is divided into three divisions. In the first, entitled "The Temple and the House," we are told of the evolution of architecture through the temple, of its sculpture and adornment, with a glance at religious belief and observance; finally, we are shown how it fulfilled its function as a centre of religious and communal life. The next division, "Life Outside the House," describes how the dwelling-house was evolved to meet the requirements of a rapidly developing people. Finally, in





[*From* Everyday Things in Archaic Greece.

(Left) Plan and reconstruction of house at Dystus, Eubœa, Greece. (Right) Reconstruction based on hut urn from the island of Melos.

"Life Inside the House," we are given details of the food, cookery, furniture, pottery, etc., of interest to us today. In conclusion, we are told about the farming, ships, trades and industry, methods of transport and travel and sport of every kind.

The book is illustrated by many delightful drawings from the authors' pens; by them we are given a unique sight into the broad lines and precise details of Greek life during this period. It can be recommended to readers of all ages, for in it there is revealed the germ of that tradition upon which the civilized world has based its development to the present day. W. K.

Everyday Things in Archaic Greece. By Marjorie and C. H. B. Quennell. London: B. T. Batsford, Ltd. Price 7s. 6d. net.

DECENTRALIZATION OF POPULATION AND INDUSTRY

THE need for the studies covered by this little book is outlined in the introduction as follows: "During the last century, the great growth of scientific knowledge, and the rapid development of mechanical inventions, have greatly added to the number and complexity of the activities and services on which the civilized life of the city depends. While the populations of large towns have continued to grow, and the material and mechanical apparatus of life have increased in volume and in complication, the social organization has not kept pace with this development." The want of order or plan in the town reflects, and, in turn, encourages a similar want of social order or structure in the multitude of inhabitants who have flocked together.

The first contribution deals with the essential basis for a good civic life, the health of the citizens, and there is elucidated the relation of health to the distribution of built-up areas and open space, both as bearing on the promotion of sound physical development in the young and on the maintenance of prompt and adequate dilution of town atmosphere with fresh air.

Facility and rapidity of movement are requisite to establish the relation of traffic to health; it is, therefore, only necessary to mention the difficulty in the case of most large cities of conveying the people, particularly the children, from the central areas to playing fields. The problem of the better distribution of population and industry is vital. Chapter V indicates the best method by which increasing population can be provided for. It advocates a localized life of high quality, still maintaining some contact with central organs of commerce and culture, which by their nature can only be developed in the heart of a great population.

Subsequently the relation of expanding town to existing villages is discussed, and the possibility of these being planned to meet the need for satellite communities. The choice or location of satellites within the rural region is an essential part of the problem, and this raises questions of the protection of the beauties of the countryside and of the old villages and towns themselves. Then follows some consideration of the possible improvement which can be effected in existing towns; how the decentralizing of industries to areas which can be more efficiently equipped may provide much needed space in the centre for playgrounds and other purposes.

In the final chapter, the available powers for regional planning, on which action arising out of the consideration of the various problems here dealt with must depend, are brought under review. The results of experience gained in the carrying out of perhaps the greatest regional planning scheme hitherto undertaken, that of the New York City region, suggest that some revision and extension of the town-planning powers available in this country are now due and much needed.

H. V. LANCHESTER

Decentralization of Population and Industry. Papers edited by Herbert Warren and W. R. Davidge. London: P. S. King and Son, Ltd. Price 4s. net.

WOOD PRESERVATION

THE recent publication of the first volume of the *Journal of the British Wood Preserving Association* marks the end of the first year of the Association's life. The contents have been limited to verbatim reports of the lectures and discussions on wood preservation in its various aspects, held during the winter in London, except, as stated in the editorial foreword, that it has been considered desirable to include also a copy of the Constitution of the Association and a full report of the meeting held at the Hotel Metropole, London, on December 3, 1929, at which the movement to form the Association was launched. It is hoped by the Association that in the future the scope of the *Journal* will be enlarged to include original articles, reviews of current literature, and an account of the numerous other activities by which the Association is endeavouring to fulfil the purpose for which it has been formed.

A photograph of Sir Harold Boulton, Bart., C.V.O., C.B.E., the first president of the Association, forms the frontispiece to the issue.

All interested in the objects of the Society, who wish to enrol as members, should communicate with Mr. R. C. B. Gardner, Secretary, the British Wood Preserving Association, 166 Piccadilly, London, W.1.

Journal of the British Wood Preserving Association. Vol. i. Price 7s. 6d. (non-members).

The Architectural Review

IN an article entitled "Brighter London Statues," published in the current issue of *The Architectural Review*, the author, Mr. William Gordon, makes three suggestions which would, he claims, if carried out, brighten up the whole aspect of London, enable us to have a modicum of art in our streets, and be of a practical and beneficent nature. First, he suggests painting the figures of the generals and statesmen of the last century in bright and even garish colours; secondly, regarding figures of public benefactors, etc., he would build up a square of cement on the base of each statue and then face it with good stone. Artists would then be commissioned to carve bas-reliefs on each one, the subjects to be carved to be left to the artists' discretion, nor should they be interfered with by art commissions or other busybodies. His third suggestion is of a practical and utilitarian nature. In those places where the statues of statesmen gather too thickly or where bas-reliefs cannot be properly seen and appreciated, the statues would also be covered by a cement square, but this time it would be used for the display of the better advertisements or serve as a background for kiosks for the sale of newspapers, flowers, etc.; others would be cut down or blown up (*sic!*) and, on the places where they stood, would be erected four pillars with a roof or awning and perhaps movable glass walls, where people would be able to enjoy coffee, and have a good view of the traffic and bustle around them.

Other articles in the *Review* include "Theatre Machines in Italy, 1400-1800," by Mr. Edward Carrick; and "Colour in Interior Decoration: Part V—Colour Reaction," by Mr. John M. Holmes. Among the buildings illustrated are the new Whitgift Grammar School, designed by Leathart and Granger, and the new head offices of Lloyds Bank, Cornhill, London, designed by Sir John Burnet and Partners in association with Campbell, Jones, Sons and Smithers.

Publications Received

The Society for the Protection of Ancient Buildings, Fifty-Fourth Annual Report of the Committee, May, 1931. Published by the Society. London: Price 2s. 6d. net.

Rural Industries. Summer Number, 1931. London: Rural Industries Bureau. Price 2d.

Economic Conditions in the Dominion of New Zealand to March, 1931. Report by L. A. Paish, O.B.E. London: H.M. Stationery Office. Price 2s. net.

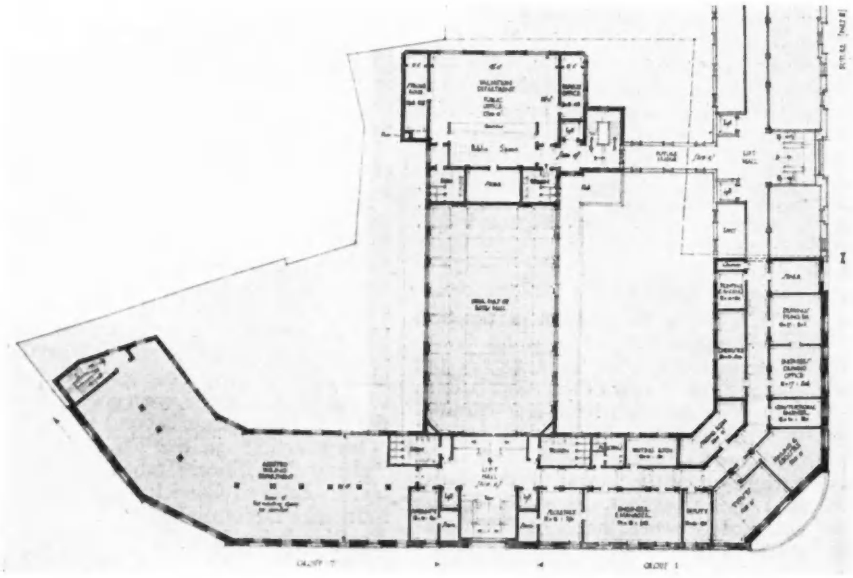
The Daylight Illumination Required in Offices. By A. K. Taylor, M.I.E.E. Illumination Research, Technical Paper No. 12. London: H.M. Stationery Office. Price 3d. net.

LEICESTER OFFICES COMPETITION

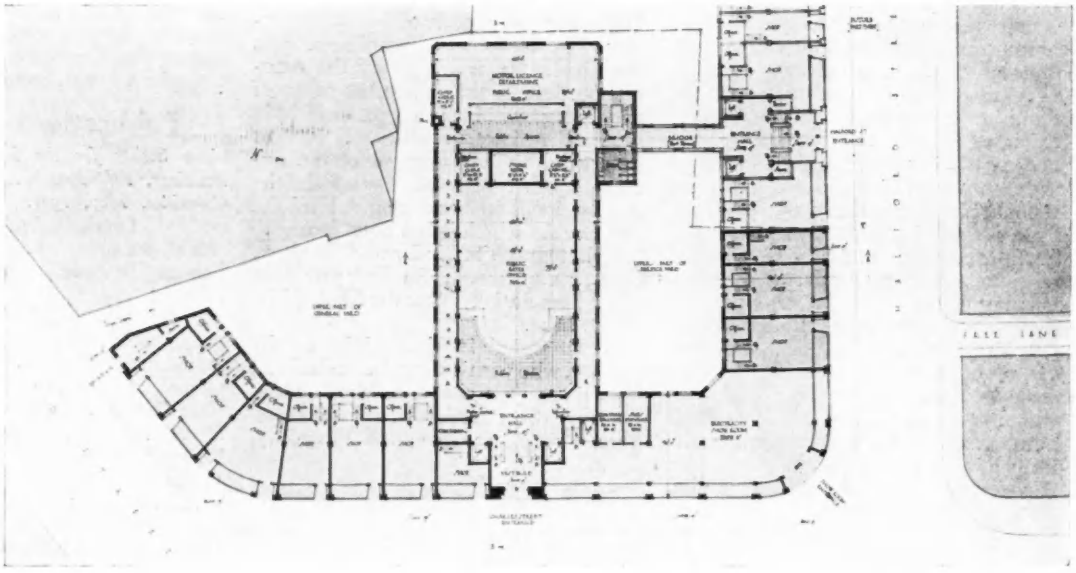
WINNING DESIGN : BY H. SPENCER SILCOCK AND GRAYSON AND BARNISH

Elevation to Charles Street

The elevation to Charles Street. The entrance shown gives access to the Rates Offices. It is flanked on the left-hand side by shops; on the other by the Corporation Electricity Showrooms.



The first-floor plan contains the upper part of the Rates Hall, valuation and assisted wiring departments and other staff offices.



The central feature of the ground-floor plan is the Public Rates Office, the main entrance to which is situated in Charles Street. A subsidiary entrance is provided in Halford Street.

ON this and the facing page are illustrated the winning designs for the proposed Corporation Offices, Leicester, and the proposed extension to Ingham Infirmary, South Shields. The assessor for the first, Mr. E. Berry Webber, A.R.I.B.A., made his awards as follows :

First premium (£300), H. Spencer Silcock, A.R.I.B.A., and Grayson and Barnish, FF.R.I.B.A., of Liverpool. Second premium (£200), G. H. Shepherd and J. G. Sidebottom, of London. Third premium (£100), Stockdale Harrison and Sons, and W. F. Cartwright, F. & A.R.I.B.A., of Leicester.

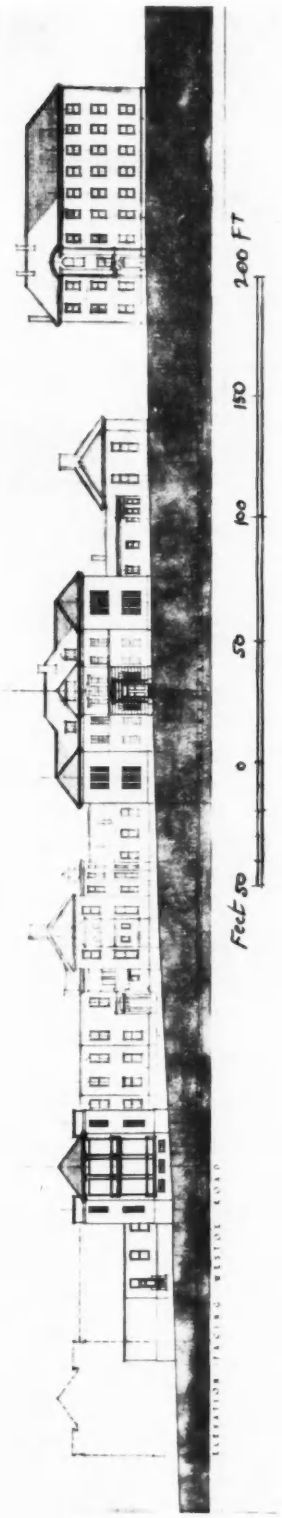
Lt.-Col. George Reavell, F.R.I.B.A., the assessor for the Ingham Infirmary Competition, made the following adjudication :

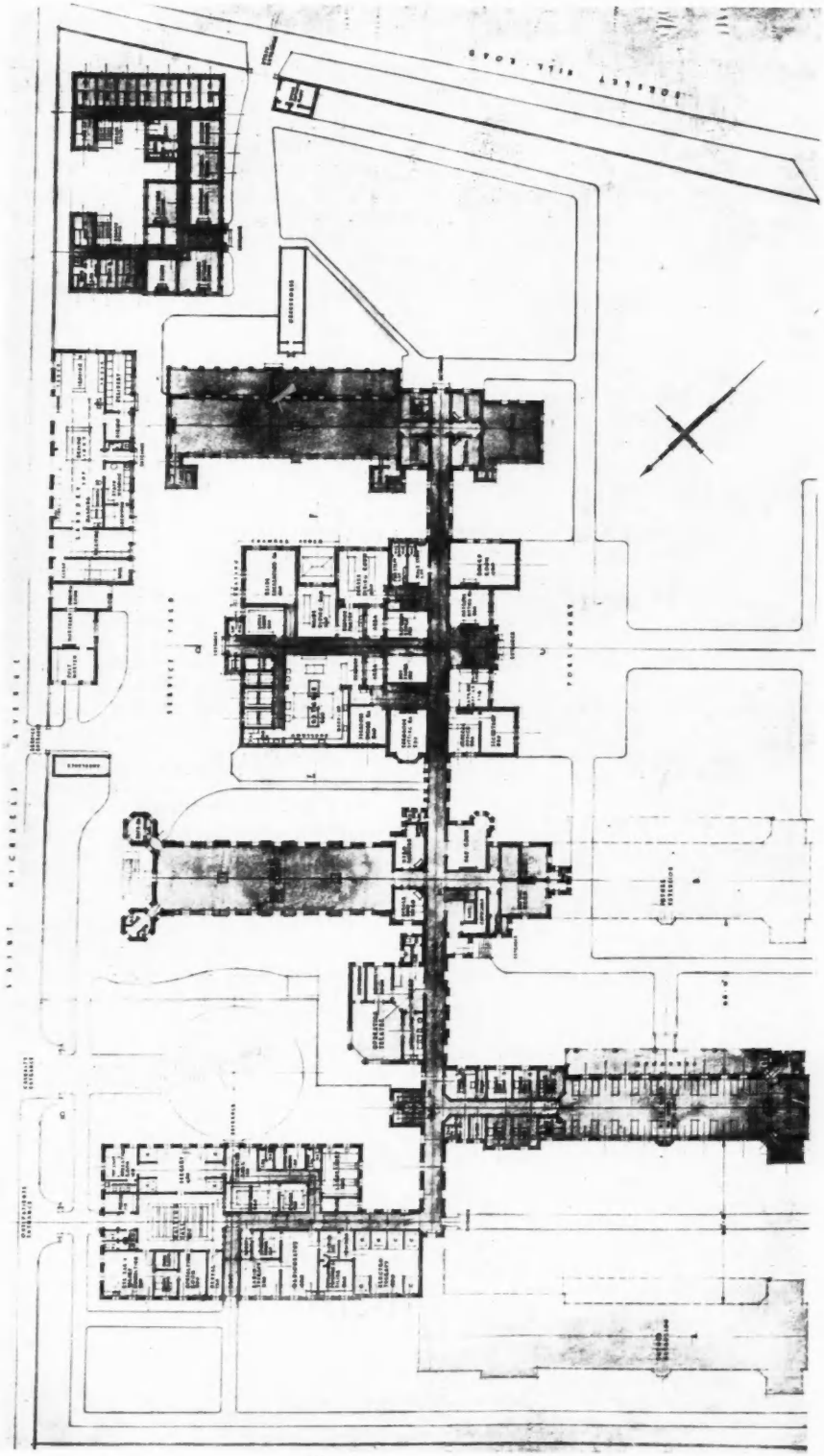
First premium (£250), Cackett, Burns, Dick and Mackellar, FF.R.I.B.A., of Newcastle-on-Tyne. Second premium (£100), W. and T. R. Milburn, FF.R.I.B.A., of Sunderland. Third premium (£50), Dryden and Shaw, F.R.I.B.A., of Newcastle-on-Tyne.

INGHAM INFIRMARY COMPETITION

South Shields, Durham: Winning Design

BY CACKETT, BURNS, DICK AND MACKELLAR





The elevation to Westoe Road, showing the main entrance to the Administration offices; and the ground-floor plan of the proposed extension to Ingham Infirmary, S. Shields.

QUESTIONS THAT ARISE

Gullies to Soakaways

A. J. A. writes: "*I should be glad of your expert's opinion as to whether it is necessary to put gullies at the feet of rain-water pipes where drained into soakaways. With a wire balloon grating at the outlet to gutter, it seems that all that is needed is a bend in the earthenware piping at the ground level and the rain-water piping let into the socket, with a cement joint. This is a cheap method, and as far as I can see has no serious objections. There is no demand for gullies in the bylaws of the district in which I am building.*"

It is advisable to provide gullies at the feet of rain-water piping, to avoid an inaccessible bend, as a seal against odours arising from the earth, and for a barrier against rats gaining access to a house by way of the piping. The method suggested by your correspondent is certainly cheap, and I have seen work executed in this manner with the stoneware socket projecting above ground level, liable to damage, and with an ugly weathered cement joint at the socket.

It is not a satisfactory job. The rain-water pipe with shoe, discharging over a gulley with brick curb, is in favour, but I prefer a trapped gulley with a back inlet. W. A. D.

Professional Etiquette

T. E. writes: "*A builder has introduced a client to me, who wishes me to design a house for which the builder will give an estimate which is to include my fees in the total sum to be paid for the house. Is this a proper thing for me, as an architect, to accept? I have known the builder for some years and he has carried out several contracts for me.*"

There is no objection provided that you make your position perfectly clear in writing to all parties.

The client should be told that your charges will be in accordance with the R.I.B.A. scale, and what this scale is.

The builder should sign the usual form of contract and be informed that although he has been given the job by the client, you, on your part, will execute the proper supervision with regard to workmanship and materials.

In reporting the estimate, which should be sent through you, the amount of your fee should be shown separately and then a grand total made.

If this is all carried out in a business-like manner, there will be no suspicion of collusion or underhand agreement between architect or builder, which could be brought up against you for unprofessional conduct.

As you know the builder for an honest man, his introduction of a client is a compliment and shows that he too finds you a straightforward architect for whom he likes to work.

It is a natural thing for a client to want to know his total liabilities before building, including fees, but you should insist that he pays you by separate cheques and not through the instalments certified to the builder as the work proceeds. A. B.

Mixing Mortar

"Piranesi" writes: "*Could your expert give me some explanation as to how the proportions are arrived at on the job when mortar is specified to be one of lime to three of sand? A test was recently made by first slaking the lime, then putting one box full of this to three similar boxes full of sand. On analysis, this turned out to be one of lime to eight of sand. What method of mixing should be specified to ensure good mortar? Textbooks are very vague on this subject.*"

Fat lime increases in volume enormously during the process of slaking, whilst hydraulic limes do not increase in bulk to any great extent. There is no doubt that fat lime, which should only be used for plastering, would show a loss in chemical composition after slaking. Ignoring the general chemical properties, in which the majority of architects take little interest, it is sufficient to say that certain proportions of slaked lime and sand have, in practice, been found to be satisfactory.

The proportions after test, as given by your correspondent, are high, but this loss can be influenced by improper burning, the freshness of the lime, and the effect of drowning the mixture with water. Quicklime, during exposure to the air, absorbs carbonic acid gas, and is weakened and becomes less adaptable for use. The quality of sand used also has an effect upon the decision of proportions. Actually, apart from the knowledge that is required to form an opinion of the quality of good materials, the proportions of the mix may vary as to plasticity, which is governed by the sand-carrying capacity. The majority of builders interpret the meaning of the specification as regards the proportion of the lime as measurement after slaking, and the specification should give some indication if it is intended that the measurement should be made before slaking.

Assuming that the former is intended, i.e. after slaking, the following proportions can be safely embodied in the specification, assuming that clean, sharp sand will be used. For coarse stuff, one part lime and two parts sand. For mortar for constructional work, one part hydraulic lime and three parts sand. These proportions, as I previously stated, may need variation on the works to ensure a good mix. Some workmen are in the habit of using mortar for brickwork with insufficient sand to afford easier working, and I personally prefer gauged mortar or hydrated lime for structural work.

W. A. D.

SOCIETIES AND INSTITUTIONS

R.I.B.A. EXAMINATIONS

THE Final Examination qualifying for candidature as Associate R.I.B.A. was held in London and Edinburgh from July 8 to 16, 1931.

Of the ninety-nine candidates examined, fifty-one passed (twelve in Part 1 only) and forty-eight were relegated.

The successful candidates are as follows:

Adkins, F. W. C.
Allen, W. H. (*Part 1 only*).
Bicknell, P. (*Part 1 only*).
Blythin, C. F. (*Part 1 only*).
Bomer, E. D. N.
Broughton, F. H.
Bubb, E. (*Part 1 only*).
Cardwell, J. J.
Caröe, A. D. R. (*Distinction in Thesis*).
Chard, F. V. S.
Clark, A. R.
Conolly, H.
Cowley, R. H.
Edgar, N.
Fancott, W. E.
Farrow, J. W.
Gardham, H. E.
Hall, A. L. (*Distinction in Thesis*).
Harrison, R. H.
Hobbs, G. B.
Howard, W. F. (*Part 1 only*).
Joseph, M.
Lindsay, R. G.
Long, A. E.
M'Intyre, D. (*Distinction in Thesis*).
Marshall, A. J. R. (*Part 1 only*).
Middlemiss, C. O. (*Part 1 only*).
Mileson, H.
Mitchell, A. H.
Mollison, W.
Moore, S. S.
Neil, N. A. G.
Padmore, R. B. (*Part 1 only*).
Penberthy, A. J. (*Part 1 only*).
Pickering, C. E.
Pilichowski, A. V.
Pittaway, H.
Potter, J. E.
Powell, M. H.
Reuben, S. S.
Salvin, T. E.
Sargent, H. L.
Stokes, D. D. S.
Thompson, B. H. (*Part 1 only*).
Thompson, J. S.
Todd, G. R. (*Part 1 only*).
Turnbull, E.
Underhill, A.
Uren, R. H.
Wardle, L. T.
Wilcockson, I. D. (*Part 1 only*).

The Special Examination: — The Special Examination qualifying for candidature as Associate R.I.B.A. was held in London from July 8 to 14, and in Edinburgh from July 8 to 16, 1931.

Of the twenty-four candidates examined, thirteen passed (four in Part 1

The Editor invites readers' inquiries on all matters connected directly or indirectly with architectural practice. These inquiries are dealt with by a board of experts, to which additions are constantly being made as and when the need arises. Readers must enclose name and address, and should send their inquiries to the Editor at 9 Queen Anne's Gate, S.W.1.

only) and eleven were relegated. The successful candidates are as follows :

Adam, W.
Benson, C. A.
Cotton, H.
Hawker, J. B.
Kershaw, S. (*Part 1 only*).
Kettle, A. (*Part 1 only*).
Moore, H. W.
Murison, F.
Powell, L. C.
Thacker, E. G. (*Part 1 only*).
Valder, W.
Wheeler, H. (*Part 1 only*).
Williams, W. R.

The Examination in Professional Practice for students of Schools of Architecture recognized for exemption from the R.I.B.A. Final Examination :—The examination was held in London and Edinburgh on July 14 and 16, 1931. Of the forty candidates examined, thirty-six passed and four were relegated. The successful candidates are as follows :

Abbott, D. N.
Albery, J. M.
Aldridge, R. de W.
Atkinson, J. R.
Bramhill, H.
Cairns, J. B.
Collie, R. A.
Cox, F. R.
Dyer, H. T.
Fox, K. S.
Franklin, H. J.
Fraser, J. S.
Gibson, A. G.
Harper, D. R.
Hicks, J. K.
Holford, W. G.
Honeywell, F. W.
Hunt, R. D.
Jeffryes, T. A.
Kendall, W.
Laidler, G. G.
Lock, C. M.
Marwick, T. W.
Massey, E. F.
Moffatt, J. B.
Nunn, A. V.
Paterson, D. S.
Samuel, G. H.
Stark, D. R.
Stephenson, G.
Sully, C. W.
Turner, W. J. C.
Twentyman, A. R.
Watts, S. J.
Wingate, J. W. C.
Wright, J. H.

R.I.B.A. EXAMINATION PAPERS

The questions set at the Intermediate, Final and Special Examinations, held in June and July, 1931, have been published, and are on sale at the R.I.B.A., 9 Conduit Street, W.1, price 1s. (exclusive of postage).

ENGLAND'S BEAUTY

"What makes new houses and bungalows ugly?" This question is asked by Miss Margaret Lee, Tutor to Oxford Home Students and Principal of Wychwood School, Oxford, in an address entitled, "England's Beauty," published in pamphlet form in order that it may be read to Women's Institutes in conjunction with exhibitions of lantern slides supplied by the Council for the Preservation of Rural England. Miss Lee supplies the following answer to her question :

"Partly that the builders of today do not, like the old builders, take the materials that lie near at hand, and therefore suit the part of England where they are. On the Berkshire Downs the old cottages are made of great blocks of chalk with overhanging eaves, and look as if they had grown there, they are so natural, and their white walls and brown thatch go so well with the brown fields and white quarries round about them; and in the Cotswolds the old cottages are made of the yellowish stone of those parts, with roofs of Stonesfield slate from the local quarries, and they too look as if they 'belonged' where they are—they are 'just right.' The same may be said of the old rosy-coloured brick and red tiles, of the Chiltern villages. But what are we to say of the glaring scarlet brick bungalows. They do not match anything; they seem to be always shouting 'Look at me!'; they are an insult to the older houses, with their soft colours and beautiful shapes."

TOWN PLANNING EXHIBITION

An exhibition of drawings will be held in the R.I.B.A. Galleries from September 29 to October 3 this year. They will include the whole of the British section of the recent exhibition held in Berlin during the Congress of the International Federation of Housing and Town Planning. In addition to the British section there will be a few examples of work now being done in other countries.

THE R.I.B.A. STATUTORY EXAMINATION

The R.I.B.A. Statutory Examination for the office of district surveyor under the London Building Acts, and the Examination for the office of building surveyor under local authorities, will be held at the R.I.B.A., London, on October 14, 15 and 16, 1931.

The closing date for receiving applications for admission to the Examinations, accompanied by the fee of £3 3s., is September 23.

Full particulars of the Examinations and application forms can be obtained from the Secretary, R.I.B.A.

THE FACULTY OF ARCHITECTS AND SURVEYORS

Sir Charles C. Allom, F.R.S.A., F.F.A.S., has been elected President of the Faculty of Architects and Surveyors for the year 1931-32. Major W. P. Reynolds, O.B.E., F.F.A.S. (London), and Mr. G. Caradoc Roberts, F.F.A.S. (Manchester), have been elected vice-presidents in addition to the following retiring vice-presidents, who were re-elected for a further year : Messrs. H. Langford Moyle, F.F.A.S. (Twickenham), A. E. McEwan-Waghorn, F.S.I., F.F.A.S. (London), and E. J. Michaux, F.F.A.S. (London). Mr. C. Lawrence Paice, F.F.A.S., of Altrincham, fills the vacancy on the Council caused by the death of Mr. Frank Gorst of Blackpool.

INDUSTRIAL DESIGNS COMPETITION

The awards in the Royal Society of Arts eighth annual open competition of industrial design have been made as follows :

Tootal Broadhurst Lee Travelling Studentship (£75), Miss W. M. Christmas (Slade School), who also received the Art Congress Studentship (£50); Simpson and Godlee Travelling Studentship, Miss I. Forbes (Edinburgh College of Art); J. H. Hyde Travelling Scholarship (£100), Miss M. C. Mungall (Edinburgh College of Art); a bronze medal for the best design in the Textile Section, Miss I. McGregor (Edinburgh College of Art). An Owen Jones Medal was also gained by the following students of Schools of Art : G. Robb (Manchester Municipal School of Art) in the Architectural Decoration Section; Miss K. R. Stenhouse (Glasgow School of Art) in the Textile Section; E. L. Clinch (High Wycombe Technical Institute) in the Furniture Section; H. M. Doyle (Liverpool City School of Art). In the Book Production Section; and J. Reddoch (Liverpool City School of Art) in the Advertising Section.

The prize of £10 offered by the Council of the Royal Society of Arts under the John Stock Trust, for a design for a Bronze Wall Tablet to commemorate the loss of R.101, has been awarded to G. Robb (Manchester Municipal School of Art).

The prizes offered by the Court of the Worshipful Company of Goldsmiths for designs for a

From England's Beauty.] [*With acknowledgment to Sir Philip Stott.*

Stanton, Gloucestershire—an unspoilt Cotswold village.

fruit knife, fork and spoon have been won by A. R. Emerson (L.C.C. Central School of Arts and Crafts) and J. Gain (Birmingham Central School of Arts and Crafts); and the prize offered by the Worshipful Company of Cordwainers for a design for a glove or jewel case covered with leather, by Miss J. G. Fleming (Bideford School of Art).

The prize offered by the Peninsular and Oriental Steam Navigation Company for a design for a poster has been awarded to W. D. Suddaby (Royal College of Art). This prize consists of two 20-guinea round trips or cruises (of about thirteen days' duration), plus £10 10s. cash.

The prize of £50 offered by the British Poster Advertising Association for a poster was divided between N. C. Cook (Slade School), C. Bellingham (Liverpool City School of Art), and J. W. Godfrey (Leeds College of Art), the first receiving £20 and the other two competitors a prize of £15 each.

F. B. Hayes (past student of the Bath School of Art): prize of £25 for a design for a poster to advertise the Isle of Man as a holiday resort.

This year there were 1,319 competitors—an increase of 94 on 1930, when 1,225 competitors entered. The number of Schools of Art represented in the competition has also risen from 155 to 170. The total number of designs sent in this year was 4,037, of which 2,365 and 1,000 were for the textile section and advertising sections respectively, these two being the largest sections of the competition.

A selection of the designs is now on exhibition, until August 31, at the Imperial Institute, South Kensington, S.W., 10 a.m. to 5 p.m. (Sundays, 2.30 to 6 p.m.).

KENT EDUCATION EXHIBITION

The second exhibition of Kent County and Craft Education Federation, held at the Thanet School of Art, was opened by the Hon. W. E. James, on Friday, July 31.

Among the exhibitors are the following :

Architectural Section : Messrs. John Little, F.R.I.B.A., W. H. Robinson, S. H. Loweth, F.R.I.B.A., R. Goulburn Lovell, A.R.I.B.A., L. Mason Apps, A.R.I.B.A., and R. Tilsley Green, A.R.I.B.A. Painting Section : Messrs. Augustus John, A. Moody, W. O. Miller, Dr. Miles Tonks and Arthur Schofield.

LAW REPORTS

PRIVATE STREETS WORKS ACT, 1892: RIGHT TO SELL

Payne v. *Cardiff R.D.C. King's Bench Divisional Court. Before the Master of the Rolls and Lord Justice Lawrence*

THIS was an appeal by the Cardiff Rural District Council from a decision of the Cardiff County Court judge, and raised the question as to the right of the Council to put up for sale premises abutting on a street in respect of which improvements had been made by the Council under the Private Streets Works Act, 1892, on the default of the owner of the premises to pay certain instalments of the sum apportioned to the premises in respect of street improvements.

It appeared that Mr. Payne became liable to pay the sum of £48 2s. 6d. in respect of street works carried out by the Council under the Act in Welwyn Road, Rhiwbine, near Cardiff, where he owned leasehold premises known as Southdown. The amount was to be paid in seven annual instalments of £6 17s. 6d. each. There were certain proceedings before the Justices. There were three instalments due with interest, and though Mr. Payne had paid the costs of the proceedings, he had not paid the instalments, the order being that he should pay £3 a month, and that in default of payment the whole became due. Default was made and a distress warrant was returned marked "no effects." Later, the Council issued notices of their intention to sell the premises, but offered to withdraw the notices on payment of £40. Mr. Payne's solicitors tendered payment of £29 odd, but not of the charges incurred in connection with the proposed sale, and on the same day Mr. Payne began proceedings in the County Court for an injunction to restrain the Council from putting up the premises for sale.

The County Court Judge found in favour of Mr. Payne and granted a perpetual injunction as asked and dismissed the Council's counter-claim asking for a declaration that they were entitled to sell the premises.

The Council now appealed.

After hearing legal arguments, the Divisional Court allowed the appeal and reversed the judgment of the County Court Judge, entering judgment in the action for the Council with costs.

The Master of the Rolls, in giving judgment, said the question here was whether the Council had the right to proceed with the sale of these premises. To his mind the right of the Council to proceed to a sale seemed to be established by section 103 (1) of the Law of Property Act, 1925, which now contained section 13 of the Private Streets Works Act, 1892.

Lord Justice Lawrence concurred.

QUESTION OF APPROVAL OF HOUSE

Prentice v. *Keen and Gorham. King's Bench Divisional Court. Before Justices Swift and Charles*

This was an appeal by Mr. Walter J. Prentice, of Upper Elmers End Road, Beckenham, against a decision of Judge Hogg, of the Bromley County Court, in favour of the defendants.

Mr. Dickinson, K.C., for the appellant, said the action in the Court below was for breach of contract in regard to the building of a house, the allegation being that the plaster was bad, with the result that the ceilings fell down. In 1926 appellant purchased the house from the defendants for £890, and one of the clauses was that the house was to be fit for habitation, built in good and workmanlike manner, and of proper and suitable material to the satisfaction of the purchaser. Plaintiff was entitled to have the house inspected by a surveyor, but he relied upon the judgment of a missionary friend, who knew about houses. They went over the house together, and plaintiff then expressed his satisfaction to his friend, and paid his money. In 1929 some of the ceilings came tumbling down, and his client's case was that the plaster was defective in the sense that it had not enough hair in it to make it binding; and further, that it had not been sufficiently pressed through the laths to make a proper "key." The cost of making good the damage was £30. The County Court Judge, having heard the plaintiff's case, held that there was no case for the defendants to answer, there being evidence that the plaintiff was satisfied with the house; and the Judge further said he was satisfied that the plaintiff inspected the house with a friend and expressed approval of it. Counsel submitted that the Judge had misconceived the issue, as the plaintiff never approved of the house to the vendor. He asked for judgment for plaintiff.

After hearing Mr. Cairns and Mr. Caswell for the respondents, the Court dismissed the appeal with costs.

Mr. Justice Charles, in giving judgment, said the question was whether the house was completed to the satisfaction of the plaintiff. Here the plaintiff took a missionary friend with him to inspect the house, and then paid his money. His lordship was satisfied that the County Court Judge came to a right conclusion when he found for the defendants. The judgment must stand.

Mr. Justice Swift : I agree. Appeal dismissed with costs.

ROAD-MAKING CONTRACT

Marsden U.D.C. v. *Sharp and another. King's Bench Divisional Court—Before Mr. Justice Rowlatt*

This matter came before the Court in the form of a special case stated by an arbitrator under section 7 of the Arbitration Act, 1889, and raised a question of the construction of a road-making contract and the amount of damages payable thereunder. The matter concerned the making of a road over Standedge Moor, and the Council alleged that the work had been badly done, and that they were entitled to damages.

Mr. Rayner Goddard, K.C., and Mr. C. J. Frankland appeared for the R.D.C., and Mr. Jenkins, K.C., and Mr. W. Stewart for the contractors.

The facts of the case are set out in the judgment.

His lordship, in the course of a reserved judgment, said that the only question argued before him, though others were indicated in the award, was which of two alternative sums, named by the arbitrator as damages, the Council were entitled to recover under clause 35 of the contract.

The clause was as follows :

" Should it at any time subsequent to the determination of the period of maintenance up to but not exceeding a period of five years from the date of the completion of the works be discovered that the terms of this specification have been violated by the execution of bad, insufficient or inaccurate work, the Council shall be at liberty to make good such work and to recover the cost thereof from the contractor . . ."

In the present case, said his lordship, the work was completed on January 15, 1925, and by December, 1929, certain portions of the road were discovered to have become defective. On January 14, 1930, the Council delivered points of claim in the arbitration, alleging a violation of the specification by the use of concrete not in accordance with the terms set out. The complaint was as to the concrete generally, but he did not think the points of claim could extend the discovery on which the Council's rights depended.

The question was how far the discovery made by December, 1926, carried them. The contention on behalf of the Council, and the question for his lordship, was perhaps not very happily stated in the award. But it was clear that the question was as to what must be regarded, so to speak, as the unit of discovery. The Council's submission was that, there having been discovered a violation of the specification as to concrete, all the bad concrete must be made good, whatever the area of inferiority subsequently laid bare.

The contention of the contractors was that, by discovering some concrete to be bad, the Council did not discover that it all was, and that they must be limited to their actual discovery.

On the construction of the clause of the contract, the work which was to be made good was the work the ill execution of which constituted the violation discovered; in other words, the substance of the discovery was the particular bad work. The Council having discovered that some particular stretches of concrete were bad, made a further discovery when they found that all was bad, and to say that the discovery of some bad patches opened up the question of all the concrete, possibly in places remote and detached from the original site of the discovery, was not he thought, to give a fair or businesslike effect to the clause.

The substance of it was to provide for defects appearing within five years to the extent of that appearance, and therefore his judgment was that the award stood for £1,928, with the consequences named, and that the contractors should have the costs of the hearing before him.

COMPETITIONS OPEN

August 27.—Sending-in day. Proposed all-Scottish House for the Ideal Home Exhibition. Limited to architects practising in Scotland or of Scottish birth. Assessor : John Watson, A.R.S.A., F.R.I.B.A. Premiums : £150, £100 and £50. Conditions, etc., obtainable from *The Daily Mail*.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor : Andrew N. Prentice, F.R.I.B.A. Premiums : £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor : Francis Jones, F.R.I.B.A. Premiums : £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor : Sydney Tatchell, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius from Liverpool Town Hall. Assessor : A. H. Moberly, F.R.I.B.A. Premiums : £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor : Robert Atkinson, F.R.I.B.A. Premiums : 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich.

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors : Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium : £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, AUGUST 12

ROYAL SOCIETY OF ARTS INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of some of the designs submitted in the above competition, including architectural decoration, textiles, furniture, book production and advertising. Until August 31. 10 a.m. to 5 p.m. (Sundays, 2.30 to 6 p.m.)

10 a.m.

KENT COUNTY ART AND CRAFT FEDERATION'S SECOND EXHIBITION. At the Thanet School of Art. Until August 14.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Liverpool and Manchester and District Branches. Joint visit to the Clarence Dock and Stanley Abattoir, followed by a tour of some of the Liverpool Housing Estates.

FRIDAY, AUGUST 14

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, Bloomsbury, W.C.1. Last day for submission of photographs for the Society's Annual Exhibition.

SATURDAY, AUGUST 15

Sunrise, 5.44 a.m. Sunset, 8.24 p.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Visits to Hunsford Brick Machinery Works and Hurstmonceux Castle.

MONDAY, AUGUST 17

Closing date of THE ARCHITECTS' JOURNAL August Holiday Sketches Competition.

SATURDAY, AUGUST 22

Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

SATURDAY, AUGUST 29

Sunrise, 6.5 a.m. Sunset, 7.55 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1

INTERNATIONAL ILLUMINATION CONGRESS. London, Glasgow, Edinburgh, Sheffield, Buxton, Birmingham and Cambridge. Until September 19.

FRIDAY, SEPTEMBER 4

INTERNATIONAL ILLUMINATION CONGRESS. At Glasgow. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1 : " Organization for the Development of Electric Lighting," by C. A. Atherton; " Progress and Teaching of Illumination in Italy," by C. Clerici; " Lighting Progress in South America," by A. M. Baidaff. Section 3 : " The Provision of Adequate Daylight in Building Regulations," by P. J. Waldram; " Daylight Illumination and Town Planning," by C. G. Möller; " Visual Performance at Various Levels of Daylight Illumination," by K. Y. Yang; " Daylight Illumination of Art Galleries with Overhead Lighting," by T. Hirayama. Afternoon Session, 2.30 p.m. Section 1 : " Home Lighting," by C. Haslett and N. E. Miller. Section 3 : " Photo-Electric Measurements of Daylight Illumination by the Use of a Model Room," by Z. Yamauti and K. Hisano; " Mathematical and Graphical Determination of Direct Daylight Factors," by A. C. Stevenson; " Prediction of Natural Illumination in Interiors and on Walls of Buildings," by H. H. Higbie and A. D. Moore. **10 a.m.**

SATURDAY, SEPTEMBER 5

Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7

SANITARY INSPECTORS' ASSOCIATION, 27 Moreton Street, S.W.1. Annual Conference to be held at Bridlington. Until September 12.

INTERNATIONAL ILLUMINATION CONGRESS. At Edinburgh. Following are some of the papers to be read. Morning Session, 9.30 a.m. Section 1 : " The Lighting of Seaside Resorts," by A. P. Allan and J. M. Campbell; " Mason Experiments in Street Lighting," by W. S. Stiles; " Modern Public Lighting by Electricity," by W. J. Jeffery. Afternoon Session, 2 p.m. Section 1 : " The British Standard Specification for Street Lighting," by C. C. Paterson. **10 a.m.**

THURSDAY, SEPTEMBER 10

INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1 : " Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2 : " Architectural Lighting," by L. Kalff; " Engineering Aspects of Architectural Lighting," by W. J. Jones. **10 a.m.**

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 16.

FRIDAY, SEPTEMBER 11

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. **10 a.m.**

ARCHITECTURAL ASSOCIATION. Annual Excursion : to Austria. The programme will include six days in Vienna, followed by a six days' motor coach tour through Austria, returning to London on September 26.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

TRADE NOTES

There are numerous books and pamphlets on mosaic and terrazzo which deal with historical facts, but so many changes have taken place in the formation, construction and adaptability of such a necessary building product, that in order to mark the fiftieth year of the foundation of Messrs. Diespeker & Co., Ltd., the firm have issued a brief treatise on the various materials with which their name has so long been identified. It is not generally realized that the firm of Diespeker were the originators of terrazzo work and other forms of mosaic decoration in this country. It will, therefore, be readily recognizable that *Mosaic and Terrazzo, 1881-1931*, is not merely a publication describing the buildings in which Diespeker have executed work, but a pictorial résumé of their more important contracts. The book is divided into separate sections, each section being devoted to one material. The order in which they are dealt with is as follows: Venetian glass mosaic, vitreous glass mosaic, Florentine mosaic, ceramic mosaic, alundum mosaic, Roman cube marble mosaic, Smaltino, terrazzo, nonslip terrazzo, precast terrazzo, terrazzo on ships, and bronze metal door frames (Diespeker's patent). Besides the coloured illustrations of terrazzo and Roman mosaic tesseræ, among the buildings illustrated, some in colour, are the following: Westminster Abbey (the late J. F. Bentley, architect); C.W.S. Dairy, Birmingham (W. A. Johnson); Midland Bank, Holborn Circus (Whinney, Son and Austen Hall, F.R.I.B.A.); Bourne and Hollingsworth, Oxford Street (Slater and Moberly, FF.R.I.B.A.); Barclays Bank, Melbury Court (Trehearne and Norman, F.R.I.B.A.); Middlesex Hospital (Alner W. Hall, F.R.I.B.A.); Selfridges, Oxford Street (Graham, Anderson, Probst and White); and the Bournemouth Pavilion (Home and Knight, FF.R.I.B.A.).

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Crane Radiators is the title of a new catalogue recently issued by Messrs. Crane-Bennett, Ltd., in which the "Pall Mall" radiators and radiator accessories manufactured by the firm are described and illustrated by photographs and plans. Two outstanding features of the catalogue are the two-columned radiator, suitable, it is claimed, for hotel bedrooms or any position where small heating service radiators are required; and the Crane Deflecting Shield. The latter is a metal curtain that fits snugly between each column, from top hub to the bottom of the castings, on the side of the radiator next to the wall. It makes little change in the radiator's appearance and can be removed for cleaning if desired. Instead of permitting the heated air to rise straight up, it deflects it outward into the room, where most required. Thus it protects walls and plaster, largely eliminates blackened areas above a radiator, and guards against damage to draperies. Furthermore, it is claimed that the Crane Shield has the notable effect of reducing the temperature of the air below the ceiling, and at the same time increasing the warmth from the floor line up to about five feet above the floor, between which levels the heat is most required. Therefore, in addition to the same conditions of comfort to the occupants of the room there is also, it is claimed, an appreciable saving in fuel consumption. Every Crane radiator, except the two-column, can be equipped with the Invisible Shield at an additional cost. An adaptation of the shield for fresh air inlet radiators is also described in the catalogue. The radiators are manufactured at the firm's extensive Ipswich works which, together with the British Standard Malleable Fittings factory, cover an area of 500,000 sq. ft.

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"Zinc is said to be electro-positive to iron, and therefore, under the influence of moisture and atmospheric corrosion, a small difference of electrical potential is created, and even though the coating of zinc, as the result of wear, becomes incomplete, it will be found to exercise a protective action on the exposed iron or steel surface. This 'galvanic' action, coupled with the fact that zinc coatings of a high degree of perfection are commercially obtainable, accounts for the extensive use of galvanized goods in all classes of work. Several different processes of producing zinc coatings have been in use, and, without entering into a detailed description of these, it may be said that by far the most important processes are those known as hot galvanizing. The 'Harco' hot galvanizing process possesses many advantages. The coating is complete and unequalled from the point of view of adherence by any other metallic coating. The zinc is definitely alloyed with the surface of the iron, and it is interesting to know that this coating is composite in character and really consists of several layers merging one into the other, so that there is no really sharp boundary between the iron surface underneath and the pure zinc above. The coating may be very roughly treated without showing any signs of becoming detached.

"An important feature of the hot galvanizing process is that manufactured articles can be galvanized after they are made, which ensures all surfaces being completely coated, with the result that the rust-producing influences are entirely excluded."—From *Galvanizing* v. *Rust*, a booklet explaining the cause and prevention of rust and corrosion in iron and steel, issued by Messrs. G. A. Harvey & Co. (London), Ltd.

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Much interesting information which should be of service to buyers and users of fabrics for theatre and cinema upholstery is given in a handbook entitled *Theatre and Cinema Furnishing*, recently published by the British Mohair Association. It contains a complete account of the needs and requirements of upholstery fabrics, and is illustrated by many interesting technical photographs and colour reproductions of fabrics. It should be noted that B.M.A. mohair velvets for theatre and cinema upholstery are obtainable in any colour required. It is an important point for architects that their colour schemes, however unusual, can be matched accurately, therefore many attractive examples of fancy effects are also obtainable. The handbook is obtainable from the Secretary, British Mohair Association, 20 King's Arcade, Market Street, Bradford.

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The Board of Trade state that they have referred to the Standing Committee appointed by them an application for an Order-in-Council to require the marking with an indication of origin of imported iron or steel flush pipes (whether galvanized or not). Representatives of any interests substantially affected by the application who desire to be heard in opposition at the public inquiry which will be held later by the Committee should communicate with the Secretary, Mr. E. W. Reardon, at the Board of Trade, Great George Street, London, S.W.1, as early as possible, and not later than August 29, 1931.

ALADDIN FACTORY

Following are the names of the general contractors and some of the sub-contractors for the offices and factory for the Aladdin Industries, Ltd., Greenford (illustrated on pages 202–207, and supplement to this issue). General contractors, C. Miskin and Sons, Ltd. Sub-contractors: Young, Austen and Young, heating and hot water; Kelvin Construction Co., Ltd., steelwork; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, patent floors, etc.; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; Henry C. Parker & Co., Ltd., facing bricks; Crittall Manufacturing Co., Ltd., windows and roof glazing; C. Isler & Co., Ltd., artesian well; Casselton Bros., stonework; Diespeker & Co., Ltd., terrazzo; Williams, Gamon & Co., Ltd., lantern lights; Hollis Bros. & Co., Ltd., flooring; Caston & Co., Ltd., handrails and balustrading; N. F. Ramsay & Co., Ltd., ironmongery; J. R. Venning & Co., Ltd., sanitary fittings; Cope & Co., Ltd., and Martin Van Straaten & Co., tile paving, etc.; H. & F. Badcock, Ltd., fibrous plaster; Anselm Odling and Sons, Ltd., marble; Morrison, Ingram & Co., Ltd., w.c. divisions; Medway Safety Lift Co., hand-power lift; W. Hitchens & Co., Ltd., laminated flush doors; Dreadnought Door Co., Ltd., fireproof doors; Jno. Booth and Sons, Ltd., partitions; Brilliant Sign Co., Ltd., bronze letters; J. W. Gray and Son, Ltd., lightning conductor; Quenby Fry & Co., Ltd., fencing; J. Briggs & Co., electrical installation and electrical fittings, including automatic telephones and floodlighting; Bratt Colbran & Co., Ltd., fire; Osler and Faraday, Ltd., electric light fittings; Estler Bros., Ltd., calorifier cover; G.W. Rly. Co., buffer stops; General Fire Appliance Co., fire buckets; Incorporated Association for Promoting the General Welfare of the Blind, mats; Henry Boyer, Ltd., forming road and paving; Gas Light and Coke Co., Ltd., gas.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BARKING Corporation has voted £38,850 for the erection of 102 houses on the Upney Farm estate, for rehousing persons from cleared areas.

Plans passed by the BARKING Corporation: Three shops, Axe Street, for Mr. G. A. Smith; mission hall, Gascoigne Road, for trustees of the Barking Baptist Tabernacle; fifty-five houses, Alfred's Way, for Suburban Developments, Ltd.; two houses, St. Mary's Road, for Mr. J. A. Graffy; colour store, Jenkins Lane, for Messrs. Gross, Sherwood and Heald, Ltd.

The City of London Corporation has appointed Mr. Victor Wilkins, F.R.I.B.A., as architect for blocks of flats to be erected in Sumner Street, BLACKFRIARS, at an estimated cost of £36,000.

The L.C.C. has passed plans submitted by Messrs. Hart and Waterhouse for the erection of buildings for the Royal Empire Society, on the site of 18–21 Northumberland Avenue, CHARING CROSS.

Plans passed by the FULHAM B.C.: Four shops and eleven garages, Greyhound Road, for Messrs. Parker, Fish and Palmer; buildings, 298–300 and 303 North End Road, for Mr. A. E. Baxter.

The FULHAM B.C. recommends a scheme prepared by Mr. Walter Cave, for extensions at the town hall, at a cost of £19,776.

The HACKNEY B.C. is to undertake a clearance scheme for the Banister Street area.

The HORNSEY Education Committee is to erect a school clinic in Crouch End Broadway, at a cost of £5,000.

Plans passed by the HORNSEY Corporation: Twelve shops and flats, Crouch End Hill, for Mr. J. White; alterations and additions, Wrestlers Tavern, North Road, for Messrs. A. O. Newman, Ltd.; alterations and additions, 106–8 High Street, for Mr. M. K. Matthews; alterations, Hornsey Central Hospital, Park Road, for Mr. J. M. Lethbridge; ten houses, Twyford Avenue, for the Rookfield Garden Village, Ltd.

Plans passed by the ILFORD Corporation: Nine shops, Redbridge Lane, and two houses, Fairview Gardens, for Mr. T. Anders; five houses, Southdene Gardens, and ten houses, Studley Drive, for Mr. L. W. Robinson; twelve houses, Silver Street, for Mr. W. L. Thompson; four houses, Hatley Avenue, three houses, Birkbeck Road, and two houses, Southdene Gardens, for Mr. J. Aldridge; twenty-six houses, Kelsie Gardens, for Mr. G. F. Siegerts; shop and store, Aldborough Road, for Messrs. Haines and Warwick; alterations, Seven Kings Cinema, Cameron Road, for Messrs. Eley and Nunn; ten houses, Netley Road, for Mr. E. Meredith; new offices, Grove Road, for Messrs. Fullers, Ltd.; twenty houses, Agnes Avenue, and four houses, Ulhall Avenue, for Mr. A. E. Wichello; three houses, Westrow Gardens, for Messrs. J. W. Moore and Son; fifty-five houses, Beech Grove, for Messrs. Fryatt and Godden.

The LAMBETH B.C. is to erect ninety-six flats in Cottingham Street, at a cost of £45,000.

The L.C.C. is structurally to improve the PADDINGTON technical institute, at a cost of £10,000.

The POPLAR B.C. is to prepare a scheme for the erection of a public hall and municipal offices in Bow Road, at a cost of £130,000.

Plans passed at ST. PANCRAS: Buildings, 196–198 Euston Road and 202–214 Euston Road; building, 2–20 Pancras Street; building, 89 Camden Road, abutting upon Rochester Road; shops and flats, Drummond Street; workshop buildings, Gough Street.

The STEPNEY B.C. is to erect seventeen blocks of tenements on a site at Limehouse Fields.

Plans passed by the STOKE NEWINGTON B.C.: Three shops, Somerfield Road, for Messrs. J. Willmott and Sons; premises for Ever Ready Co., Carysfort Road, for Messrs. H. Seymour Couchman and Sons; reconstruction of the "Rose and Crown" public-house, Church Street, for Mr. A. E. Sewell; alterations, Synagogue, Walford Road, for Messrs. Kellands, Ltd.

The Victoria Structural Engineering Co., Ltd., is to construct a greyhound racing-track in Garrett Lane, WANDSWORTH.

The WESTMINSTER City Council has prepared a scheme for continuing Savile Row into Conduit Street, at a cost of £99,000.

The WOOLWICH B.C. is to erect 400 houses on the Middle Park estate, at an estimated cost of £156,000.

SOUTHERN COUNTIES

Plans passed by the BOURNEMOUTH Corporation: Three shops and flats, Christchurch Road, for Messrs. Malmesbury and Parsons; two houses, Belle Vue Road, for Mr. W. R. Wilkins; two houses, Harewood Avenue, for Messrs. Midgley and Hardy, Ltd.; sixteen houses, Bankside Road, for Mr. R. Straker; four houses, Claremount Avenue, for Mr. S. G. Ward; two houses, Howeth Road, for Mr. P. G. Hollister; three shops and flats, Maxwell Road, for Mr. Arion; two houses, Belle Vue Road, for Messrs. A. F. Clarke and Sons; parish hall, Burleigh Road, for churchwardens; three houses, Moordown, for Mr. A. F. V. Holley; seven houses, Luther Road, for Mr. C. Wotherspoon; house and two shops, Barnes Lane, for Mr. H. Smith; alterations, 189–193 Old Christchurch Road, for Messrs. Edwards & Co., Ltd.; alterations and additions, Seabourne Road, for Alcrest Confectionery Co.; additions, St. John's parish hall, Vicarage Road, for Church Council.

Plans passed by the GRAVESEND Corporation: Two houses, Norfolk Road, for Stability Building Co.; three houses, Cross Lane, for Mr. T. Bennett; seventeen houses, Gatwick Road, for Mr. H. L. Smith, on behalf of Messrs. Dagnall Bros.; two shops, Stone Street, for Messrs. Robert Hopkins and Sons.

The HASTINGS Corporation recommends the reconstruction of another section of the White Rock baths, at a cost of £42,800.

Plans passed by the HASTINGS Corporation: Eighteen houses, Marina estate, for New Ideal Homesteads, Ltd.; twelve railwaymen's cottages, West Marina Station, for Mr. F. Ellson; six houses, Hythe Avenue, for Mr. H. H. Ford; additions, Institute N.D. Des Missions, Old London Road, for Mr. J. S. D. Hicks; six houses, St. Helens Road, for Mr. J. S. D. Hicks; two houses, Harold Road, for Mr. J. Hunt.

The HERNE BAY U.D.C. has approved the layout of a new housing site in Claremont Road, provision being made for the erection of eighty houses.

Plans passed by the HERNE BAY U.D.C.: Three shops and flats, The Broadway, for Mr. C. E. Morris; alterations, Hampton Inn, Hampton, for Messrs. H. Anderson; four bungalows, Ivanhoe Road, for Mr. F. Iggulden; bungalow, Beltinge Road, for Mr. R. Messenger.

The OXFORD Corporation has approved the layout of land at Rose Hill for the erection of 124 houses.

The OXFORD Corporation is to erect forty houses on the Quarry Fields estate.

Plans passed by the OXFORD Corporation: Additional story, 9–13 George Street, for Mr. J. C. Leed, on behalf of Mr. De La Mare; additions, Buttery Beef Lane, for Pembroke College trustees; warehouse, Marlborough Road, for Messrs. Salter Bros.; additions, nurses' quarters, Acland Home, Banbury Road, for Committee; shop, corner Iffley Road and Howard Street, for Mr. E. G. Burton; new hospital buildings, Radcliffe Infirmary, Woodstock, for Committee; extensions, Church Hill Road estate, for Mr. A. J. Colbourne.

EASTERN COUNTIES

The CHELMSFORD Corporation Library Committee recommends seeking sanction to borrow £20,800 for the erection of the new library block.

The CHELMSFORD Corporation Housing Committee recommends acquiring eighteen acres of land near Waterhouse Lane, for housing purposes.

MIDLAND COUNTIES

The CHESTERFIELD Corporation is to erect forty-six houses in Newbridge Lane, five in Stand Road, and twenty-two in Walton Crescent.

The DERBY Corporation is to erect a nurses' home at the city hospital, at a cost of about £31,000.

The DERBY Corporation is to erect a garage at the Ford Street depot, at a cost of £17,000.

The DERBY Corporation has voted estimates of £190,000 in connection with the erection of some 600 houses on the Normanton estate.

The SMETHWICK Corporation has approved plans for the erection of a clinic and branch library building at Bearwood, at a cost of £11,500.

Mr. William Lees is to develop a building estate of two-and-a-half acres of land off Mallin Street, SMETHWICK.

Plans passed by the SMETHWICK Corporation: Four shops and flats, Bearwood Road, for Mr. E. Hewitson; surgery and flat, 171 Oldbury Road, for Dr. C. V. Smout; alterations, premises corner of Bearwood Road and Dunsford Road, for Messrs. Jones and Son; three houses, Pitcairn Road, for Mr. J. Reece.

The SUTTON-IN-ASHFIELD U.D.C. is to erect fifty-nine houses on the Twitchwell estate.

NORTHERN COUNTIES

The BIRKENHEAD Education Committee has obtained a site in Whetstone Lane for the erection of a central school.

The GRIMSBY Corporation is to construct another 100 houses on the Nunsthorpe estate, at a cost of £36,400.

The Lancashire Education Committee has obtained a site at LITHERLAND for the erection of an elementary school and the provision of playing fields.

The MANCHESTER Corporation is seeking sanction to borrow £17,000 for the erection of branch washhouses at Collyhurst and Gorton.

The MORECAMBE Corporation has approved plans prepared by the county architect for the erection of the new library in Queen Street, at a cost of £15,000.

Plans passed by the MORECAMBE Corporation: Two bungalows, Heysham Road, for Messrs. Barrow Bros.; two houses, Kensington Avenue, for Mr. G. Jackson; two houses, West End Road, for Mr. J. H. Carleton; two houses, Morecambe Road, for Mr. A. Heathcote; two houses, Balmoral Road, for Mr. G. W. Omerod; eight houses, Moss Grove, and eight houses, George Street, for Messrs. Brook and Kershaw; six houses, Craiglands Avenue, for Mayfield Building Company; two houses, Hall Drive, for Messrs. H. Hillman and Son; alterations and additions, Bare Lane station, for L.M.S.; eighteen bungalows, Osborne Road, for Messrs. William Gardner & Co.; alterations, Wellington Hotel, Marine Road, for Mr. J. Rigby; seven houses, Thornton Road, for Messrs. Harrison and Moore.

The PENRITH U.D.C. is to purchase land at Penny Hill for the erection of fifty houses.

The PENRITH U.D.C. recommends a scheme for the erection of 120 houses (100 non-parlour and twenty non-parlour two-bedrooms) on land adjoining the Castle Hill site, at an estimated cost of £45,000.

The RIPON Corporation is to consider a proposal for the provision of a public swimming bath on the land at the rear of the Spa Baths.

The SALFORD Education Committee is to erect new buildings for the Pendleton High School.

The WALLASEY Corporation is to erect a further 100 houses on the Moreton estate.

The Lancashire Education Committee has obtained a site at WALMER BRIDGE, for the erection of a junior school.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_1	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter		1	8
Joiner		1	8
Machinist		1	9
Mason (Banker)		1	8
,, (Fixer)		1	9
Plumber		1	8
Painter		1	7
Paperhanger		1	8
Glazier		1	8
Slater		1	8
Scaffolder		1	4
Timberman		1	4
Navvy		1	3
General Labourer		1	3
Lorryman		1	5½
Crane Driver		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . . ,,	2	10	6
Hydrated Lime . . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Rapid Hardening Cement . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . . ,,		10	6
Washed Sand . . . . ,,		11	6
2" Broken Brick . . . ,,		9	6
¾" ,, ,, . . . ,,		12	6
Pan Breeze . . . . ,,		6	6
Coke Breeze . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8		—
Channel junctions . . ,,	7	0	12	6
Channel tapers . . . ,,	5	6	7	9
Yard gullies . . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . . lb.		6		—
Gaskin . . . . . ,,		5		—

BRICKLAYER

	£	s.	d.
Flettons . . . . . per M.	3	1	6
Grooved do. . . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :			
Stretchers . . . . ,,	21	10	0
Headers . . . . . ,,	21	0	0
Bullnose . . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R. at Nine Elms :	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . . ,,	2	11
York stone . . . . . ,,	6	9
,, Sawn templates . . . ,,	7	6
,, Paving, 2" . . . . F.S.	1	8
,, ,, 3" . . . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station :			
20"× 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . . as 1" F.S.			9
Deal, Joiner's, ... ,, ,,			5
,, ,, 2nds . . . ,, ,,			4
Mahogany, Honduras . . ,, ,,		1	3
,, African . . . ,, ,,		1	1
,, Cuban . . . ,, ,,		2	6
Oak, plain American . . ,, ,,		1	0
,, Figured ,, . . ,, ,,		1	3
,, Plain Japanese . . ,, ,,		1	2
,, Figured ,, . . ,, ,,		1	5
,, Austrian wainscot . ,, ,,		1	6
,, English ,, . . ,, ,,		1	11
Pine, Yellow . . . ,, ,,		1	0
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . . ,, ,,		1	3
,, Burma . . . ,, ,,		1	2
Walnut, American . . ,, ,,		2	3
,, French . . . ,, ,,		2	3
Whitewood, American . . ,, ,,		1	1
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
Deal matchings, ¾" . . ,,	1	15	0
,, 1" . . ,,		16	0
,, 1¼" . . ,,		17	6
,, 1½" . . ,,	1	6	0
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	0	0
,, 1¼" . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

Scotch glue . . . . . lb. 8d.

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts :	TUBES. Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
	FITTINGS.		
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ½" . . . ,,	10	0
,, ,, ⅝" . . . ,,	9	9
,, ,, ¾" . . . ,,	9	6
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0
,, ,, 3" . . . ,,	4	0

Cast-iron rain-water pipes of ordinary thickness metal .	s. F.R.	d. 7	s.	d. 10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door ,,		—	6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets ,,	4	0	6	3
Plinth bends, 4½" to 6" ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5		6
Stop ends . . . . each		6		7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	21	6
,, drawn pipes . . . ,,	22	0
,, soil pipe . . . ,,	25	0
,, scrap . . . ,,	11	6
Solder, plumbers' . . . lb.		11
,, fine do. . . . ,,	1	3
Copper, sheet . . . ,,	1	0
,, tubes . . . ,,	1	4

L.C.C. soil and waste pipes :	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9½
Lath nails . . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 ,,	1	0	to	1	3
,, ,, 2 ,,	1	2	,,	1	7
,, ,, 3 ,,	1	7	,,	2	5
,, ,, 4 ,,	2	1	,,	2	11
,, ,, 6 ,,	2	3	,,	3	2
,, ,, 8 ,,	2	6	,,	3	6
,, ,, 12 ,,	2	9	,,	3	8
,, ,, 20 ,,	3	0	,,	3	11
,, ,, 45 ,,	3	3	,,	4	1
,, ,, 65 ,,	3	7	,,	4	6
,, ,, 90 ,,	3	10	,,	4	9
,, ,, 100 ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 ,,				1	0
,, ,, ,, 2 ,,				1	3
,, ,, ,, over 2 ,,				1	9
,, ,, plate, n/e 1 ,,				1	6
,, ,, ,, 2 ,,				3	0
,, ,, ,, 5 ,,				4	0
,, ,, ,, 7 ,,				5	0
,, ,, ,,over 15 ,,				6	0
,, ,, ,,over 15 ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	3
Patent knotting . . .		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add "	3	0
If in underpinning	" "	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1	13 6
" " " (4-2-1)	"	1	18 6
" " " underpinning	"	2	2 0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

	£	s.	d.
Brickwork, Flettons in lime mortar Per Rod	32	0	0
" " in cement "	34	0	0
" Stocks in cement "	41	10	0
" Blues in cement "	62	0	0
Extra only for circular on plan "	3	0	0
" backing to masonry "	2	0	0
" raising on old walls "	3	0	0
" underpinning "	10	0	0
Fair Face and pointing internally F.S.			3
Extra only for picked stock facings "		1	0
" red brick facings "		1	6
" blue brick facings "		1	9
" glazed brick facings "		4	6
Tuck pointing "			10
Weather pointing "			4
Slate dampcourse "		1	0
Vertical dampcourse "		1	3

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
2" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1¼" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	18	0
Do. in flashings	"	2	0	6
Do. in covering to turrets, etc.	"	2	7	6
Do. in soakers	"	1	13	6
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

	½" s.	d.	¾" s.	d.	1" s.	d.	1½" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks	—		—		—		—		—		5	9
Extra, only to bends Each	—		—		—		—		2	3	6	6
Do. to stop ends "	7		9		1	0	1	3	2	0	—	
Boiler screws and unions "	3	6	4	0	5	6	8	0	—		—	
Lead traps "	—		—		7	6	10	6	—		—	
Screw down bib valves "	7	6	10	6	12	6	—		—		—	
Do. stop cocks "	10	0	12	0	16	0	23	6	56	6	—	
4" cast-iron ½-rd. gutter and fixing									F.R.		1	3
Extra, only stop ends									Each		1	0
Do. angles									"		1	6
Do. outlets									"		3	8
4" dia. cast-iron rain-water pipe and fixing with ears cast on									F.R.		1	6
Extra, only for shoes									Each		2	6
Do. for plain heads									"		5	6

PLASTERER AND TILING

	£	s.	d.
Expanded metal lathing, small mesh Y.S.		3	9
Do. in n/w to beams, stanchions, etc. "		5	6
Lathing with sawn laths to ceilings "		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc. "		2	6
Do. vertical "		2	9
Rough render on walls "		2	3
Render, float and set in lime and hair "		3	0
Render and set in Sirapite "		3	3
Render, backing in cement and sand, and set in Keene's cement "		4	6
Extra, only if on lathing "			9
Keene's cement, angle and arris F.R.			8
Arris "			3
Rounded angle, small "			3
Plain cornices in plaster, including dubbing out, per 1" girth "			2
1" granolithic pavings Y.S.		5	0
1½" " "		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed "	1	2	0
9" × 3" " " "	1	7	6
Extra, only for small quadrant angle F.R.			9

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper from	"	3	0

STEEPLE OF A CHURCH IN DENMARK

ARCHITECTS' WORKING DRAWINGS OF A TIMBER BELFRY SHEATHED IN COPPER

[*Thomas Harning and Fredericksen, Architects*

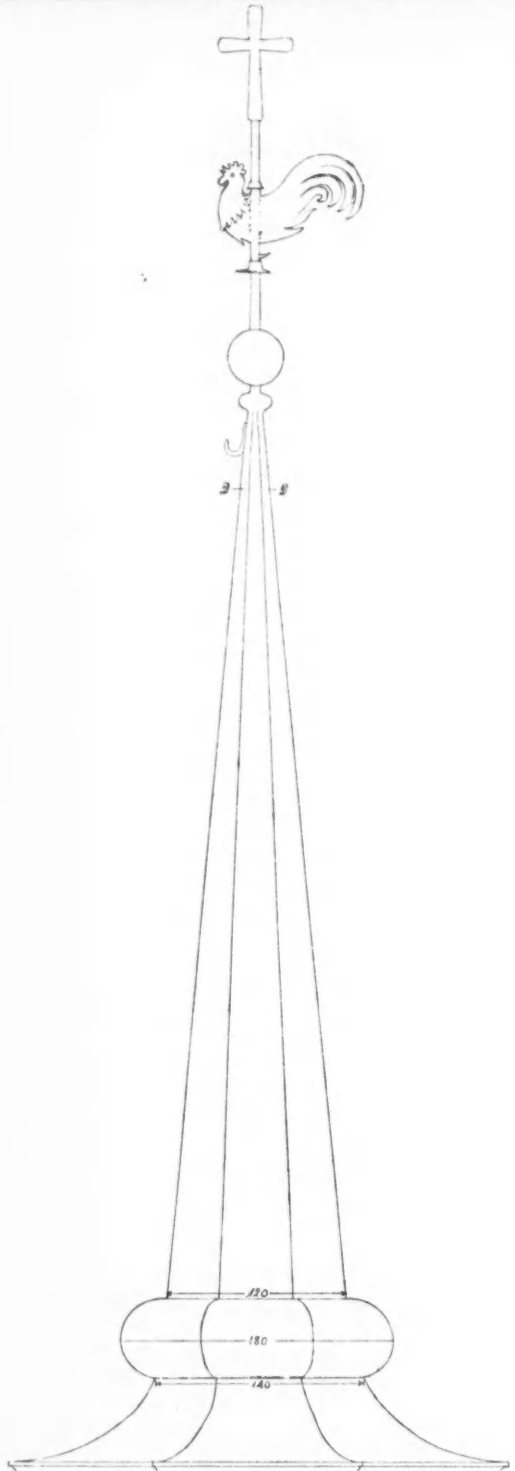
VIEW OF THE LINDEVANG CHURCH FROM THE STREET

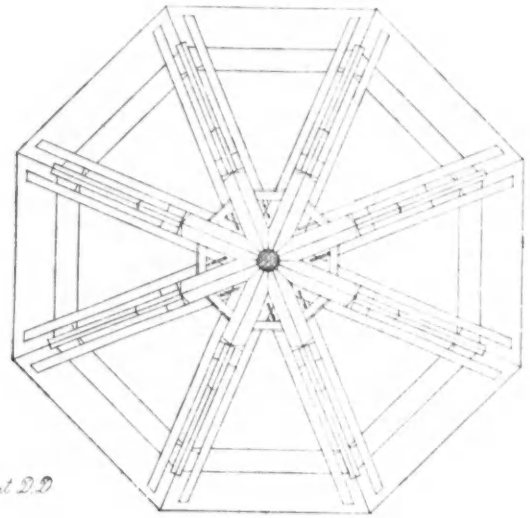
THE church in Denmark, of which a general view appears above, and a nearer one of the steeple on the last page, while within are the architects' scale working drawings of this detail, was opened in September of last year. The main fabric is of red hand-made bricks, with vertical stripes of a yellow variety used for decorative effect; and the plinth is of black bricks. The roof is covered with red pantiles.

The constructional details of the timber-framed campanile are clearly shown on the drawings, and present several features of interest, such as the alternate carrying through solid of the interlacing joists at various levels. The centre post is slightly tapered.

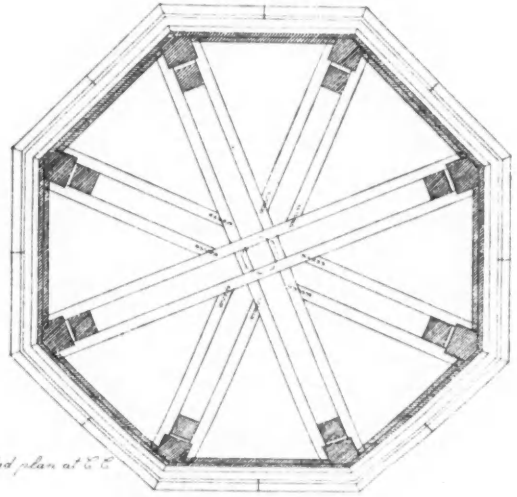
The steeple is sheathed in copper, and the weather-vane, in the design of a cock, is gilt.

A future supplement will be devoted to details of the main entrance.

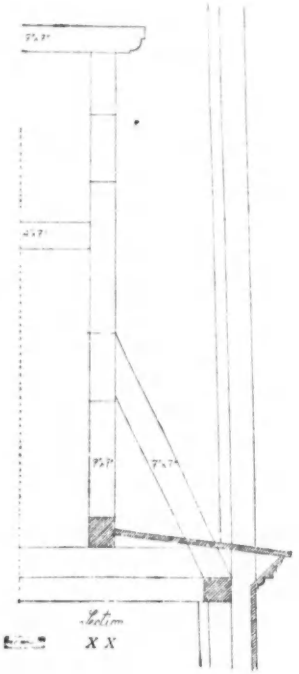




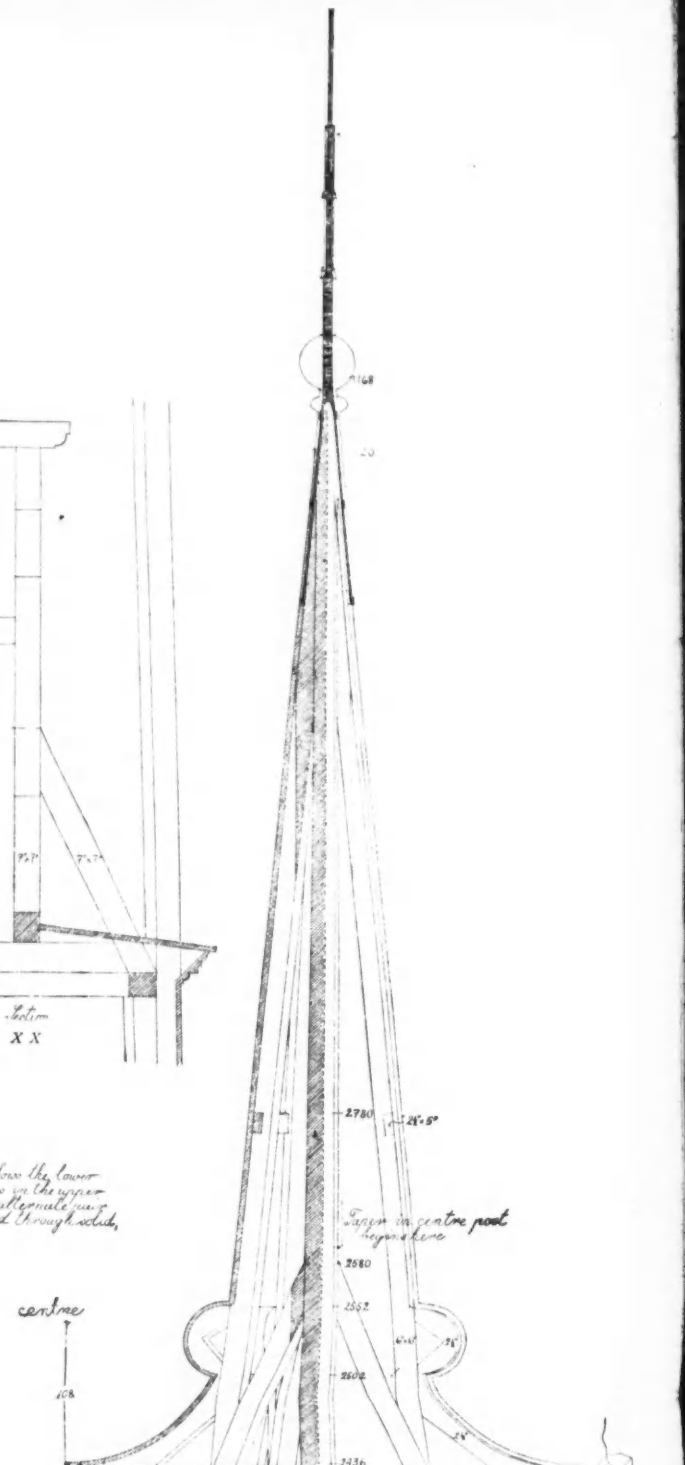
Plan at D.D

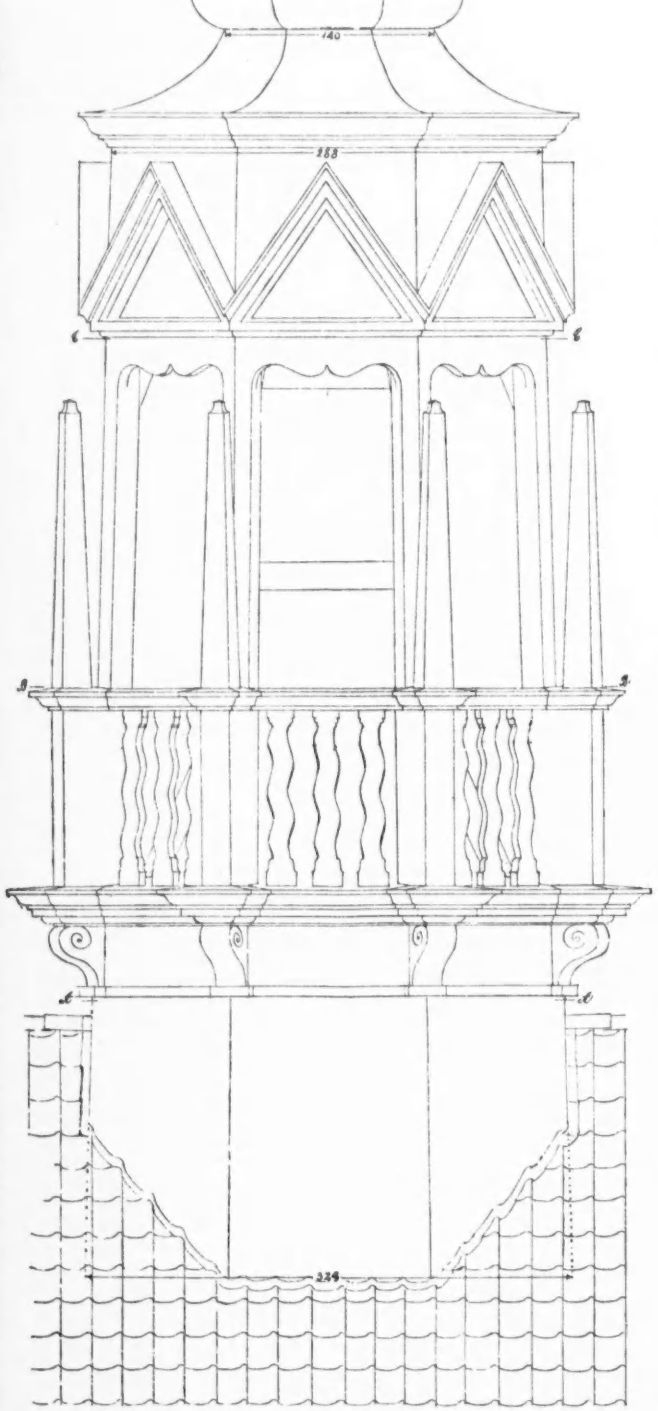


Reflected plan at E.E



This plan shows the lower set of joints on the upper curb & the alternate joints were carried through as dots.



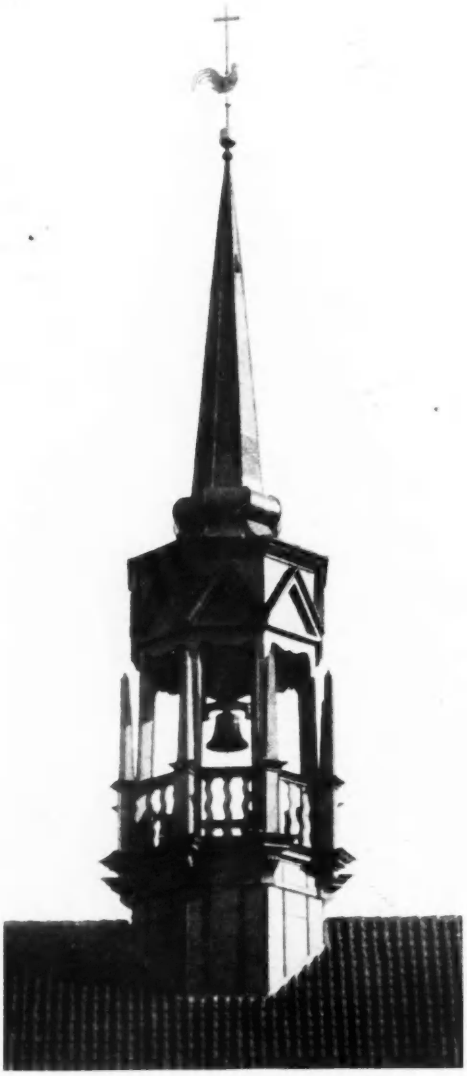


Reflected plan at C.C

Plan at B.B

Reflected plan at A.A

DEN NYE KIRKE I SOLBJERG SOGN



THE COPPER-SHEATHED STEEPLE

A TOWER IN BRICK AND STONE

AT THE ALADDIN FACTORY, GREENFORD, MIDDLESEX

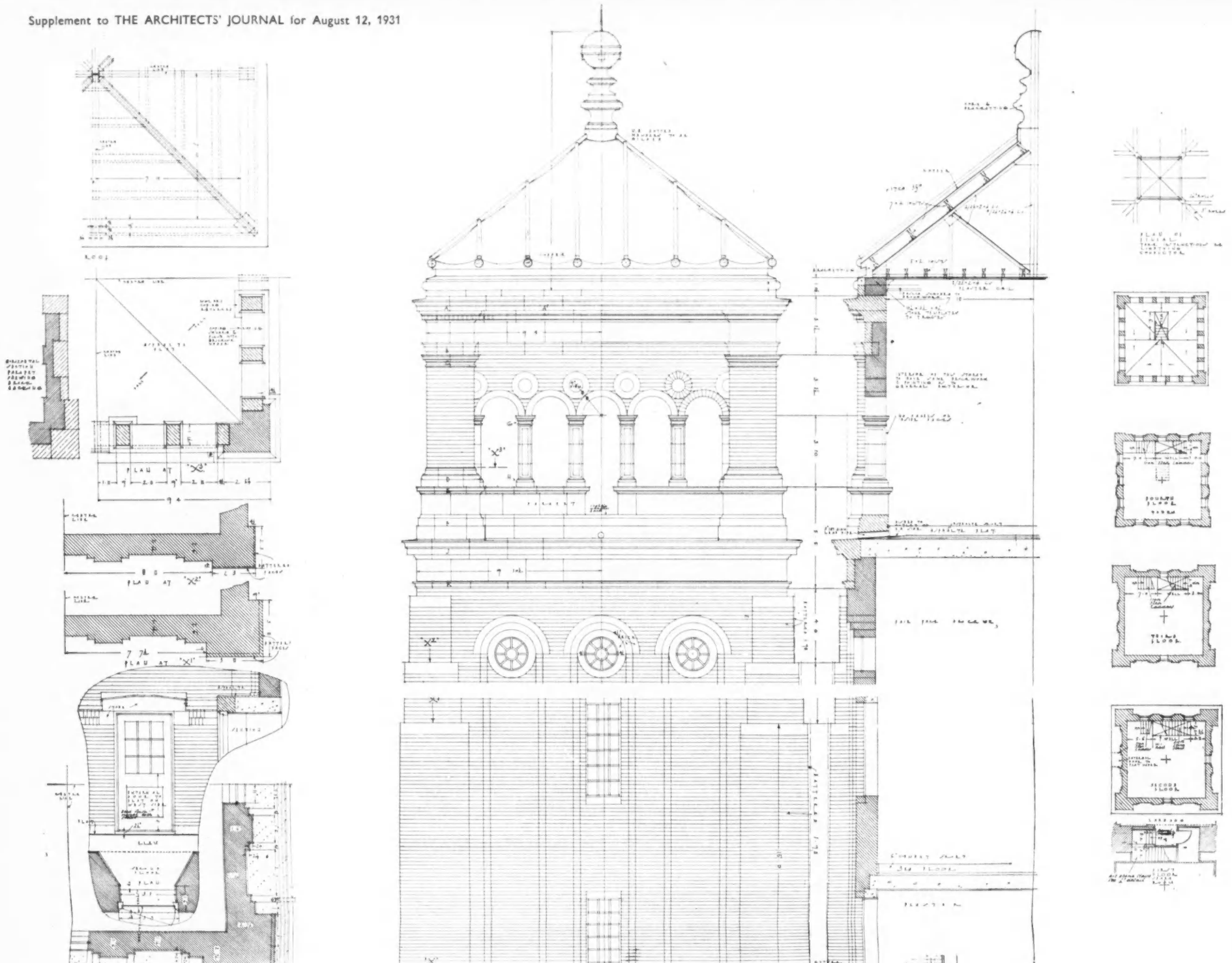
[*Nicholas and Dixon-Spain, Architects*

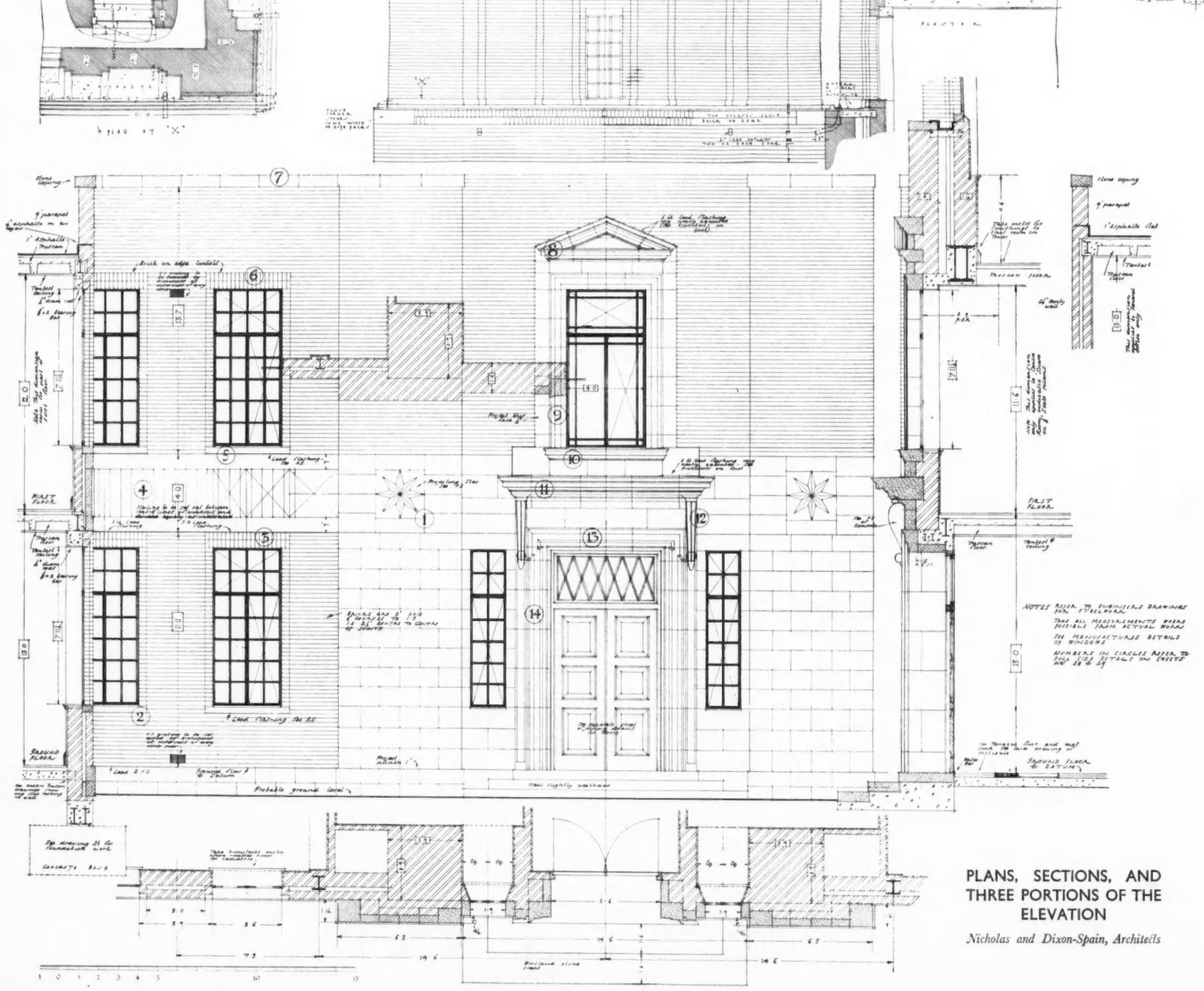
THE WATER TOWER AND MAIN FACTORY ENTRANCE

THE tower, of which a photograph is given above, while the architects' drawings of some of the details are reproduced overleaf, forms the central feature of the new factory for Messrs. Aladdin Industries, Ltd. Ninety feet high, it provides the main entrance to the factory, and storage for water, which is pumped from an artesian well 450 ft. deep.

The building is faced with 2-in. multicoloured bricks with Bath stone dressings, and the floors are of trussed concrete. The site is bounded on the north by the Grand Junction Canal, and the main south frontage will eventually face to Western Avenue, a new arterial road.

Further views of the factory appear on other pages of this issue.





PLANS, SECTIONS, AND THREE PORTIONS OF THE ELEVATION

Nicholas and Dixon-Spain, Architects

SELECTED PRECEDENTS:

THE DEEP STAIR WINDOW

LAST week examples of the horizontal window were illustrated. Its complement is the deep vertical window.

In Continental towns, where all classes have lived mainly in large blocks of flats for the last two or three generations, deep vertical windows for lighting staircases are now becoming conspicuous features of domestic architecture.

As these buildings rarely exceed five stories in height, the provision of lifts is the exception rather than the rule. Thus, the common staircase is the spinal cord of the floor plan and the elevations alike.

Anyone who has lived in French or German flats built before the war will be familiar with the almost impenetrable gloom in which the staircases are plunged during the day-time: an obscurity as unhealthy as it is not infrequently dangerous. After the war, when economic conditions rendered more rational types of construction and plainer façades imperative, the necessity of improving their lighting and ventilation was at last recognized.

The general abandonment of the old plan, based on the enclosed "well," means that staircases have to be lit from either the front or the rear. The vertical window, extending continuously from the attic to the ground floor, offers an ideal solution of this requirement. It also provides a simple and inexpensive manner of giving formal repetitive significance to each block of flats when several are grouped together as units of a single façade, besides being a decorative detail valuable in itself.

Figure **5** *affords the simplest possible example. In this case, as also in figure* **4** *(where the only material difference is that an angular form of window has been preferred to one flush with the wall), the centralizing emphasis of a prominent vertical feature counterbalances the salient horizontal stress of the bands of parallel balconies.*

Figure **2** *shows a rather unusual French disposition. Here the same stabilizing inflection undoubtedly helps to pull an asymmetrical composition, combining various types of fenestration, into a more coherent unity.*

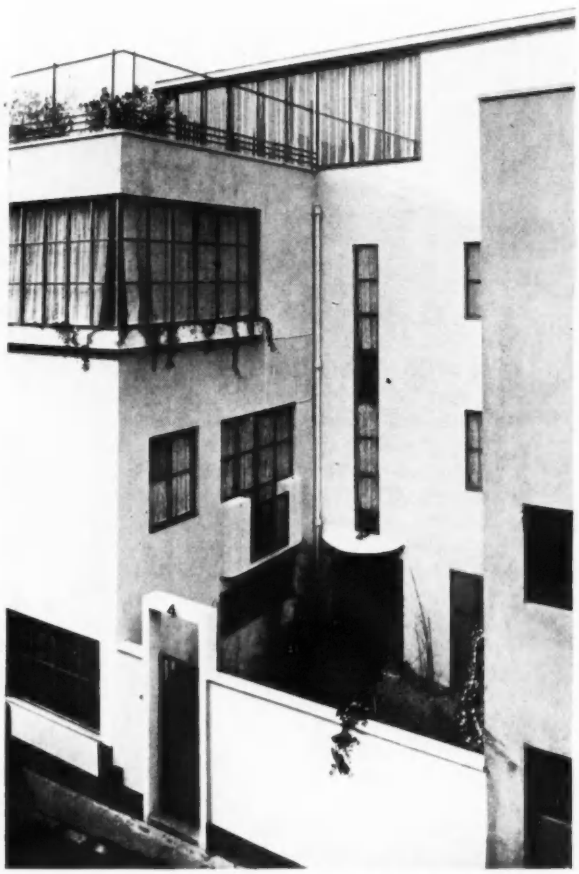
In figure **3**, *the staircase is lit on either side by twin corner windows instead of frontally by a single casement.*

Figure **1** *illustrates the use of a vertical window running down the steeple of a church for lighting the staircase leading to the belfry.*

P. MORTON SHAND

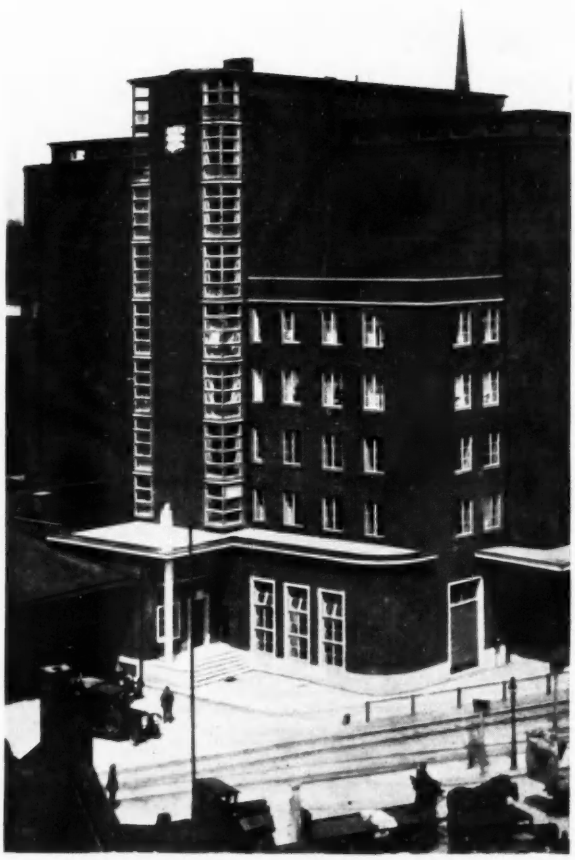
[*Josef Gočár, Architect.*

1. *ROMAN CATHOLIC CHURCH IN REINFORCED CONCRETE AT VRŠOVICE, PRAGUE.*



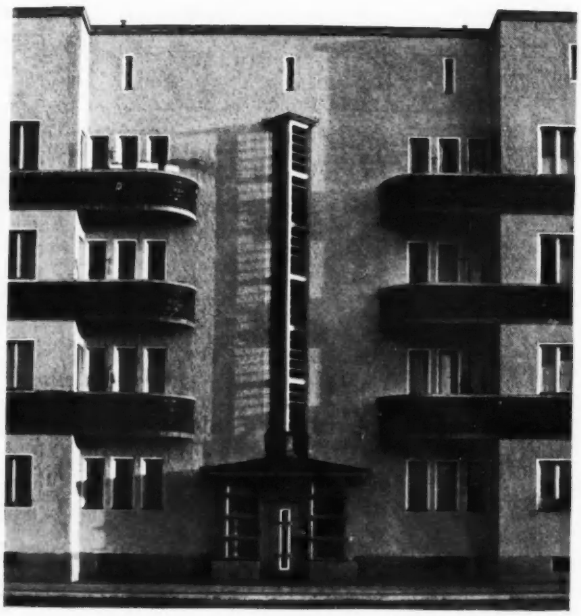
[*André Lurçat, Architect.*

2. *STUDIO-FLATS AT THE CITÉ SEURAT, PARIS.*



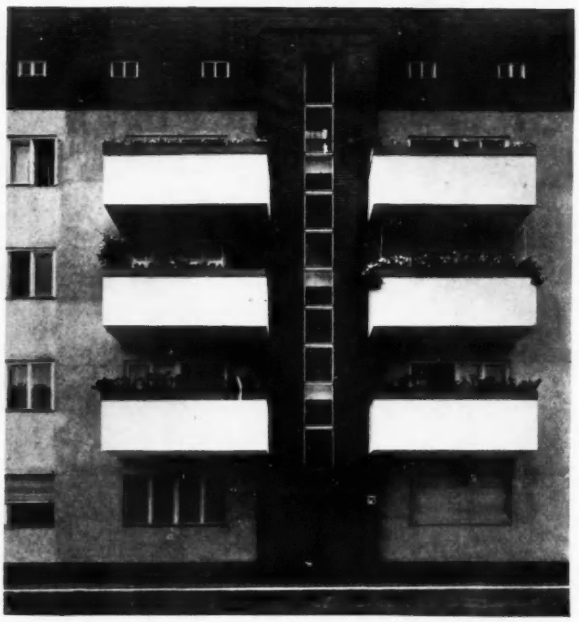
[*By courtesy of Wayss und Freytag, A.G. Frankfort-on-Main.*

3. *COLD STORE FOR HERRINGS, HAMBURG DOCKS.*



[*O. O. Kurz, Architect.*

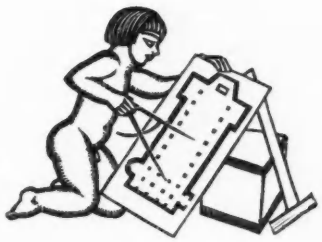
4. *BLOCK OF FLATS IN THE KARL-THEODOR-STRASSE, MUNICH.*



[*Erwin Gutkind, Architect.*

5. *BLOCK OF FLATS IN THE LICHTENBERG SIEDLUNG, BERLIN.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, AUGUST 19, 1931

THE UNMENTIONABLE FEE

THE Practice Standing Committee of the R.I.B.A. have issued a warning in terms not often to be found in the pages of their *Journal*.

"The Committee," they say, "receive a large number of letters from members who have difficulties about their fees, and it is safe to say that in nearly nine cases out of ten the difficulties arise entirely from neglect of the architects concerned to act upon the constantly reiterated advice given to them. . . . An infinite amount of trouble would be saved . . . if members would be more businesslike . . . ."

It is extraordinary that architects are so loth to regard their fees as part of the cost of building. Estimates are prepared and discussed freely with clients as the subject-matter of the business in hand, while fees, assessed as a percentage of these costs, capable of being added to the total after an elementary calculation, are reserved and kept in the background, like an awkward child, because for some reason or other it is not felt to be in accordance with the architect's position as a professional man and a gentleman to bring in his fees in the grand total of bricks and mortar, or discuss them with his client as a plain matter of business.

From this senseless taboo, for taboo it is, all manner of difficulties arise, which more often than not leave the architect in a position which his original attitude presumed to be impossible. For a man who cannot bring himself to discuss fees with his client at the beginning of the job is either afraid or is too proud to do so. With the first we need not bother; he doesn't deserve fees. The second, in acting as he does, disparages his value to his client and the value of his profession to society.

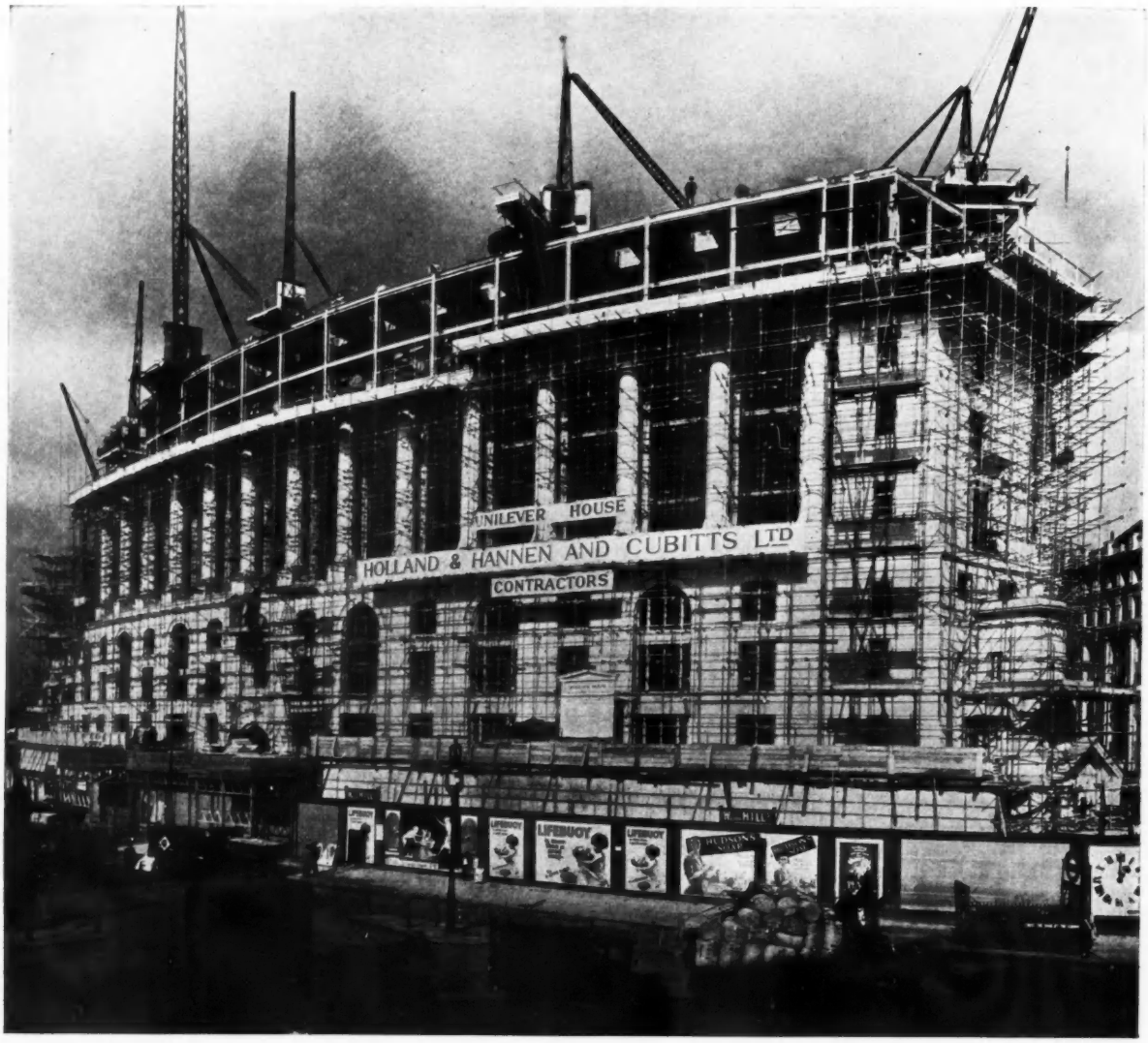
For a fee of six per cent. a competent architect today performs services in excess of that amount in designing and regulating the erection of building. Many business men are surprised at the amount of detailed work and supervision which is at their command for that percentage, especially when, as the job proceeds, its complexity unfolds itself before their eyes. It is safe to say that few clients, business men or otherwise, can regard these charges as excessive when they know what is covered by them.

The whole secret, which experience most abundantly proves, lies first in putting the architect's position clearly to the client, and in following this with an equally clear arrangement for the payment of fees, either in one sum or in instalments as the job proceeds.

It is the only way of preserving for himself the real sense of dignity and equality, to say nothing of the peace of mind which eases the architect's burden of responsibility. Money is power, and the architect's position as agent-adviser constitutes a delegation of power which is completed by the payment of fees, and merely sustained while fees are only presumed to be paid, no matter how well founded the presumption may be.

The whole question was discussed at length by Karshish in *The Honeywood File*, or better still, in that earlier treatise called *The Tribulations of Early Practice*—a most excellent composition of sound advice—but we would go even further than he in urging the architect to be as much a man of business in all matters concerning fees as he hopes to be in those concerning the interests of his client.

Sir John Soane never bothered about unpaid fees, either because he was too absorbed in his work or too proud to put himself in the position of suitor. It is a lesson to know how much of his later years was spent in efforts to collect what was his by the very best rights in the world, and how little he managed to salvage.



THE NEW BRIDGE-HEAD AT BLACKFRIARS

A photographic study of Unilever House, Blackfriars, E.C., showing the rapid progress which is being made with its erection. Occupying the Victoria Embankment site of the old De Keyser's Hotel, it is but a few months since the steel-work began to rise up into a huge skeleton, in preparation for its outer covering of concrete. An important feature of the building will be two equestrian statues, by Mr. Reid Dick, one of which can be seen above the entrance on the right of the perspective drawing seen on the facing page. On the extreme left of the illustration is the statue of Queen Victoria.

Sir John Burnet, R.A., Tait and Lorne are the architects, and Mr. J. Lomax Simpson, consultant architect.

NEWS & TOPICS

PLANNING AND UNEMPLOYMENT SCHEMES

THE committee set up by the Government to see whether Regional Reports might yield plans for future work have had little to report, as might have been expected by those who know to what extent these reports and schemes are advisory only. In the first case, regional schemes are to a great extent restrictive, making proposals for the zoning of land and the provision of open space, neither of which, useful though they be, can be expected to provide work.

*

Road proposals are by far the most important item and roads have been explored pretty thoroughly by all governments. We have it on authority that the Road Fund is nearly exhausted by the demands made upon it, and Colonel Wilfred Ashley, in a recent open letter, gave it as his opinion that we had spent all we should on the road system some time ago, and that most present expenditure is an extravagance. This committee was therefore in the nature of an extravagance itself.

THE LABYRINTH

The urgent plea in last week's leading article, entitled "The Labyrinth," for a considered, comprehensive plan for London, is the logical expression of ideas that have been exercising minds that by their training may be said to be predisposed to think in such terms. But it is well to recall that they are ideas that have been circulating for some time in lay circles, too. *The Week End Review* published, in February last, an article from which the following quotations are worth reprinting :—

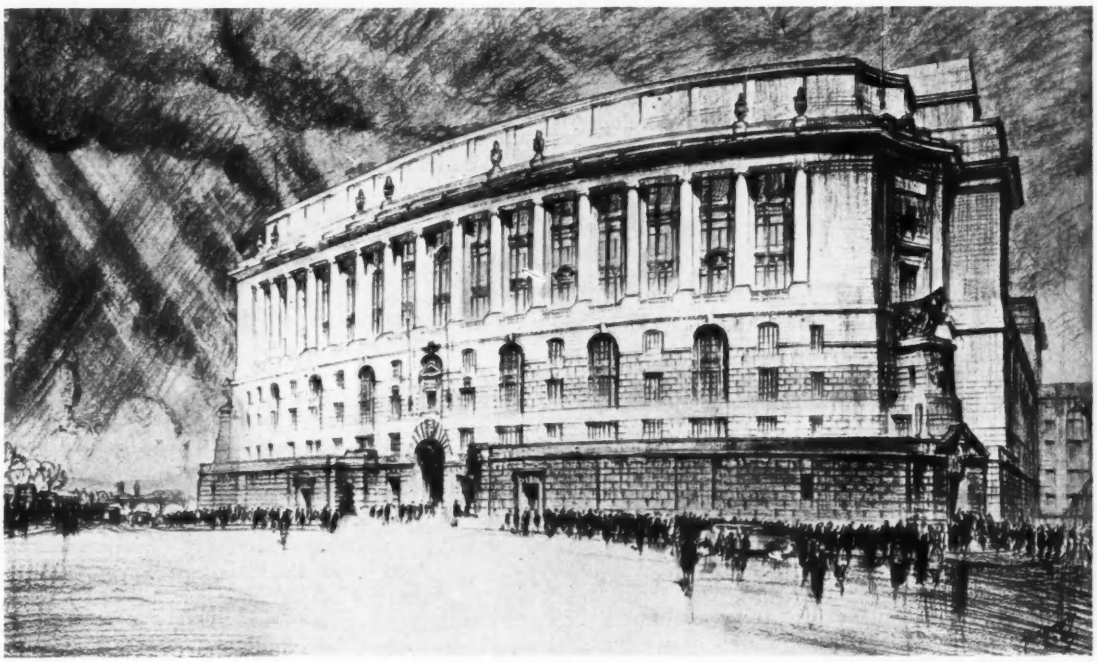
A bold treatment of the national problem of London must take a large place in any constructive planning policy. It is perhaps fortunate that metropolitan conditions are so indisputably chaotic; if they had been patched up within twenty years or so of meeting contemporary needs, as in Paris, it might be more difficult to secure agreement for uncompromising action. The fact that London is an historic City, containing a number of ancient buildings which have to be preserved, must tend to modify a plan seeking to fulfil the demands of the twentieth and twenty-first centuries, but cannot be allowed to nullify it. London at the moment is a city of spectacular waste, due to the sudden growth within the past century of a modern great town on the almost unchanged street-plan of a medieval haphazard settlement. . . .

It is therefore suggested that one of the first steps under a National Planning Policy must be to set up a London Planning Commission to prepare a detailed scheme for the rebuilding of London in accordance with the requirements of a first-rate modern city within a period of, say, thirty years. . . .

It might, to give but one example, recommend taking clearly marked sections and reconstructing them in succession beginning with the wasted South Bank between the Thames, Vauxhall, the Oval, the Elephant, and London Bridge. Here the whole jungle might be cleared with provision for gathering of all railway lines, electrified and running below the surface, into a single spacious South Terminus, the rest of the site being given over to public and business buildings, standing, at ample distances apart, instead of lining cramped, mean corridor-streets.

MASS-PRODUCED HOUSING

The mass production of cheap housing comes very much to the fore with the new Housing Act and the expenditure on 40,000 cottages. One side urges mass production as an essential bound up with very much more scientific



[*Sir John Burnet, R.A., Tait and Lorne, architects ; J. Lomax Simpson, consultant architect.*

Unilever House, E.C. From the perspective drawing by J. D. M. Harvey, exhibited at the Royal Academy this year.

management than has obtained hitherto. Mr. Bossom couples this with a plea that central direction should help to save the countryside. But, says his critic, mass production is inimical to such salvation, for it entails a restriction upon variety and local character expressed in local materials. It does; but is that so important as it at first appears, and is variety in material as important as character in design ?

*

Look at the standardized housing of Germany, and, if you are not too biased against the particular convention, can you say that it is inexpressive or lacks variety within its range ? Take again our own admirable eighteenth century, which left a trail of stucco building over the south of England. Are these, because they are stucco and not local brick, characterless and out of harmony ? Do you want to pull them down because they are un-Kent like or don't smack enough of true Somerset character ? Surely not. Then why not realize that mass production, while it limits the range to a certain extent, cannot prevent intelligent architects from leaving the stamp of character upon building ? The point is that mass-produced houses *must* be architect-designed if they are not to become eyesores. Exactly how far the range is to be restricted depends upon the thoroughness of mass production, which should consist not only of machinery for reproduction of parts, but for the selection of the most fitting and the most beautiful parts, in the same way that metal windows were evolved by collaboration with architects. Labour is the crux of the problem, but mass production would be a waste of time without the architect.

ON COMMITTEES

Manchester fulfils the first order of planning in its recent resolve to amalgamate the offices of the Improvements and Building Committee and the Town Planning Committee in a new Committee to be called the Town Planning and Building Committee. (All those "committees" in one sentence just shows you the kind of age we live in !) This provision saves overlapping, but it is, of course, the coming of the Town and Country Planning Bill which is foreshadowed. Up till now planning has only taken place on undeveloped land, and urban activities have been controlled, but not planned. The inclusion of developed areas throws the balance on to the town to such an extent that town planning becomes the central fact, and the committee in charge of it must be responsible for the planning of the entire city. It will prove to be the most important committee on the council, with the natural exception of that of finance.

THE A.A. MATERIALS BUREAU

The recent letter to *The Times* from the President of the Architectural Association, pointing to the value of the A.A. Materials Bureau in connection with the Government's report on the Education for Salesmanship reminds me again of the extraordinary service which that Bureau performs to the profession. That the profession is not quick to make the best use of the service I am well aware. That is why I feel disposed to discuss it at length.

*

There are several such bureaux in the world. I have seen them in America and I know of them elsewhere. None, I venture to think, can approach this one in London in point of real usefulness, for just as we are professional in that we act without bias, so this bureau, supported by the A.A., and not by payment of exhibition fees or rents, occupies a position of trust, and advises without partisanship in the choice of building materials.

*

Materials by themselves will tell most of their story so long as you can compare and handle, but anyone who has gone along to Bedford Square looking for help, will say at once that the Bureau revolves about Mr. Winser. It is his knowledge of the facts of manufacture, sale, transport, and cost that gives the exhibition its peculiar value to those who know it. There is no other person in London who knows more about materials, old and new, than he, and no one more pleased than I to learn that his work is to be given greater scope in the future.

YORK'S FIVE DERELICT CHURCHES

It must have gone very much against the grain when a commission of clergy advised the demolition of five York churches. They are faced with a situation of unusual difficulty in that the centre of population in York has been displaced and dispersed into outer suburbs, which are as unprovided with new churches as the city is overstocked with old. No particular value attaches to churches as yet undesigned, while the old churches are part of the fabric of antiquity that gives York its special character. Economy presses hard, demands that the waste should be avoided, that clergymen shall be paid decent salaries and that flocks shall not go untended. No one but the Church pays for these old churches and few attend.

*

But they do, by their presence, enrich the spiritual life of the place and have their effect upon the inhabitants. The risk in selling their sites is the encroachment of commercialdom with its negative, unspiritual appeal to the senses. If one could feel that the Church could exercise intelligent control over the new buildings, one might be satisfied that the demands of hard times should be met, but this is a great deal to expect.

"THE MONSTER OF MUSWELL HILL"

Alexandra Palace is well named "The Monster of Muswell Hill." It stands there as a monument to a distressing period of English architecture, in a park that is surrounded by buildings hardly less ugly. The news that the palace was to be saved for London might have been received with doubtful acclamation when it continued in its former state. Continue it must so far as its outer appearance is concerned, but its "innards" are to be taken out by a feat of architectural surgery, and Mr. E. C. Davies is to turn a warren of apartments into a vista of great halls, the largest capable of accommodating 15,000 people, for shows of the magnitude which this age of mass movements demands. Let us hope the acoustics of its concert hall are capable of amelioration.

*

A building of this type is lacking in North London. The South has the Crystal Palace—that pioneer of all exhibition buildings. Other cities, too, feel the need for great halls. Liverpool, for instance, the livest and most civic-minded of all provincial towns, even though it possesses in St. George's Hall the finest civic building in the country, is thinking seriously of investing in another hall large enough to hold the great exhibitions and pageants by means of which it announces its aims, its opportunities and attractions. This, for a city already building two great cathedrals and a tunnel costing five million pounds, shows a remarkable trust in the future.

ASTRAGAL

This perspective sketch, showing the principal entrance and south elevation, has been reproduced in order to show how the tower, not yet built, will harmonize with the rest of the structure.

A MODERN CATHOLIC CHURCH

DESIGNED BY WILFRED C. MANGAN

ALTHOUGH St. Paul's Church, Haywards Heath, Sussex, here illustrated, conforms fully with the conventional requirements of a modern Catholic church, the treatment breaks away in many respects from usually accepted forms. In plan the church is cruciform.

The nave, in three square bays equal in each dimension, is covered by intersecting barrel vaults springing from square brick piers, the transverse vaults being extended over the aisles. At the east end they are further extended laterally to cover the transepts. A shorter bay, also vaulted and flanked by side chapels, connects the nave with the sanctuary.

The latter is spacious and well elevated, and runs the full width of the nave and aisles. Like the nave, it has a barrel-vaulted ceiling, groined and elongated. The sacristies are placed on the south side of the sanctuary under a low flat roof, so that they do not interfere with the lines of the main building.

The outstanding feature of the church is its brickwork, the design calling for a high standard of craftsmanship in this respect. Sussex purple stocks have been used for the deep basecourse, which runs round the whole of the building, and above this the walls are faced with multicoloured, hand-made, sand-faced bricks, set in Flemish bond, with wide joints of cream-coloured mortar, and very freely relieved with cherry-red arches and panels of small pattern brickwork in contrasting shades and textures, whilst under the gables and elsewhere verges and bands of semicircular tiles in a bold pattern add further relief to the surfaces.

The roof is fairly high pitched and covered with Lombardic sand-faced Roman pattern tiles.

Another somewhat unusual feature is the liberal use of light-coloured marbles

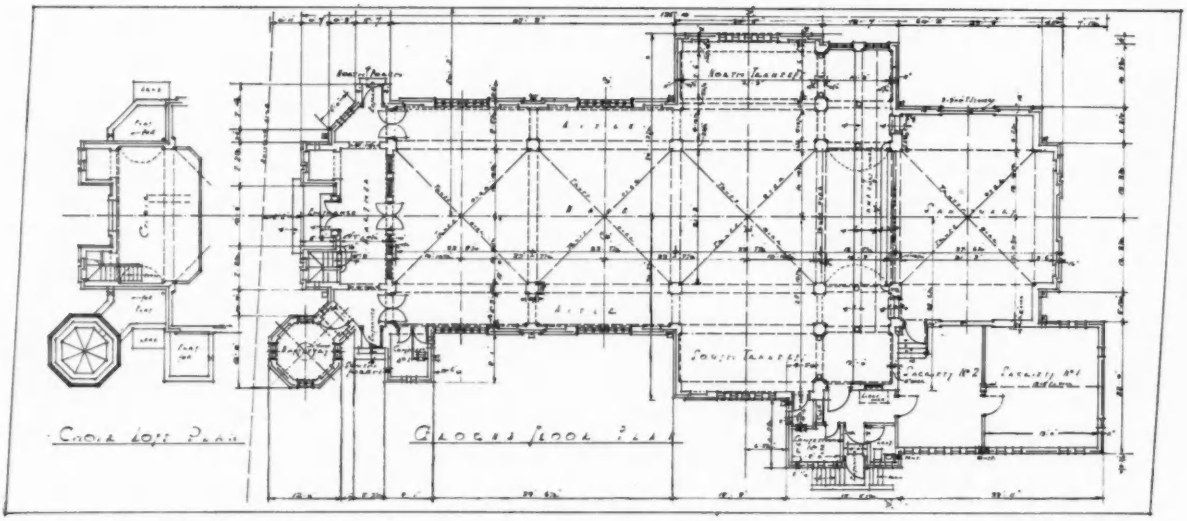
The south elevation. Sussex purple stock bricks have been used for the deep basecourse which runs round the whole of the church, and, above this, the walls are faced with multicoloured, hand-made, sand-faced bricks set in Flemish bond, with wide joints of cream-coloured mortar. The roof is covered with Lombardic sand-faced Roman pattern tiles.

in conjunction with the brickwork. These are introduced first in the surround to the main entrance. Marble is also introduced in a series of narrow seven-light circular-headed windows in the lower part of the aisle walls, and in the sanctuary and side chapels. These are enriched with mouldings and twisted shafts, and are carried out in dark-veined Sicilian marble, the openings being filled with leaded glass in metal frames.

The floors generally are of polished oak blocks, the narthex and baptistry being paved with marble terrazzo tiles, and the sanctuary steps and paving carried out in white and various coloured marbles.

The present high altar is a temporary structure. It is intended to replace this eventually with a suitable marble altar covered by a canopy or ciborium.

The tower shown on the perspective sketch on page 237 has not yet been built.

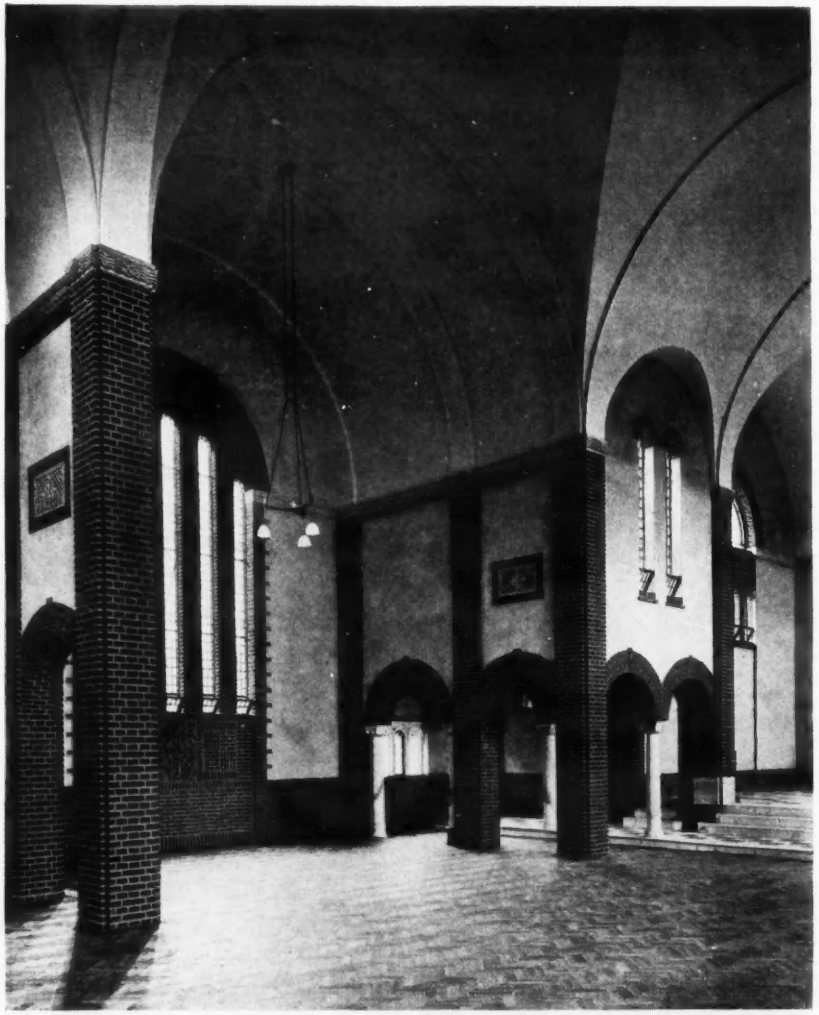


St. Paul's Catholic Church, Haywards Heath, Sussex.] *By Wilfred C. Mangan.*

The ground-floor and choir loft plans. The principal entrance faces west: additional doors at the north and south ends of the narthex provide extra exits, as well as alternative means of entrance for the avoidance of draught in any particular state of the weather. The sacristies are planned in a one-story structure on the south side of the sanctuary; its exterior is seen on the right of the photograph at the top of this page.

St. Paul's Catholic Church, Haywards Heath, Sussex.]

The principal entrance, fronting Hazelgrove Road. The oak entrance doors are deeply recessed under a high brick vault. The door surround is executed in golden pavonazzo marble, moulded and carved, with a bust of St. Paul in Venetian mosaics in the tympanum. The windows in the octagonal projection seen on the right of this view light the baptistry.



[*By Wilfred C. Mangan.*

Looking from the nave towards the north transept. The steps leading up to the high altar are seen on the right. The lower part of the walls, the nave piers and the window arches are built of multicoloured bricks. The upper wall surfaces are finished in a deep cream rough-textured plaster, relieved by panels of elaborately patterned brickwork.

The steps and paving of the sanctuary are carried out in white and various coloured marbles; the floor of the church generally is laid with polished oak blocks.

St. Paul's Catholic Church, Haywards Heath, Sussex.] [*By Wilfred C. Mangan.*

Looking from the second step of the sanctuary towards the choir loft and the doors leading to the narthex. The brick arches which enclose the side chapels are supported on marble shafts.

The frontage to New King's Road, from the south-west. The piers and lintels of the shopfronts are of cast stone; and, in order to preserve an orderly appearance, the names of the shopkeepers on the fascias are executed in uniform bronze letters.

BROXHOLME HOUSE, FULHAM, S.W.

G. TOPHAM FORREST,
Architect to the London County Council.

BROXHOLME HOUSE is situated at the junction of New King's Road and Harwood Road, Fulham, S.W.

The site was formerly occupied by a Council elementary school, and upon its appropriation for housing purposes by the Council, opportunity was taken to set back the frontages on New King's Road and Harwood Road, in order to effect a much-needed road widening.

Broxholme House is a tenement building, is the first of its kind to be built in London by the Council in accordance with the terms of the Housing (Financial Provisions) Act, 1924, and was completed in February last. The accommodation comprises twenty-six three-room, ten four-room and eight five-room dwellings, or a total of forty-four dwellings.

The building is of five stories. The dwellings on the upper floors are approached by external corridor balconies extending from two common staircases, the chief habitable rooms being on the side of the building away from the balconies. The ground floor on the main façade is devoted to eight lock-up shops, and the remainder of that story and the whole of the first and second floors are arranged as flats. The third and fourth floors are combined into a series of two-story dwellings, so that no dwelling has its entrance at a greater height than three flights of stairs above the ground level. In the roof space are drying lofts for domestic washing. The windows of the rooms in the south-western wing look over Eel Brook Common.

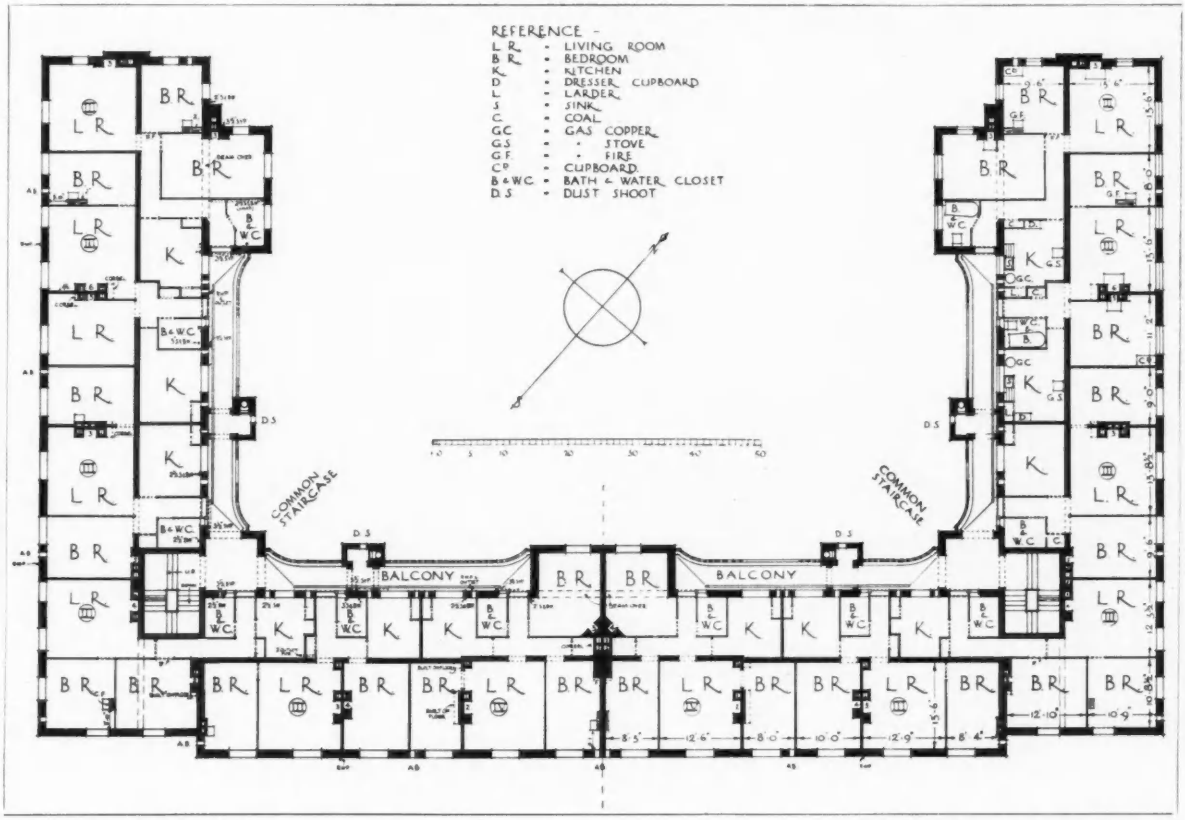
The building is faced with red-brown bricks, relieved by brighter red bricks in the arches and the quoining to the windows. The piers and lintels forming the fascias of the shop fronts are of cast stone. The roofs are covered with hand-made plain tiles.

Each dwelling, in addition to its habitable rooms, includes a kitchen, with a larder, a dresser cupboard, a sink with draining board, and a gas copper, from which hot water is supplied by a hand pump to the bath. In each principal bedroom a fuel fireplace is provided, and in each second bedroom a gas fire has been fitted by the gas company. Artificial lighting is by means of electric light, and some plugs are installed. Hoppers for the disposal of house refuse are provided on each floor, connecting by a shoot to dust chambers at the ground level; from these the refuse is collected by the local authority. The courtyard is paved with concrete, and in it are two large beds for grass and flowers. In addition to the shops and dwellings, twelve perambulator and cycle sheds and a caretaker's store have been provided. The cost was £31,986.

Broxholme House, Fulham, S.W.] [*G. Topham Forrest, Architect to the L.C.C.*

The south-west front overlooking Eel Brook Common. The walls are faced with red-brown bricks, relieved by brighter red bricks in the arches and quoins to the windows. The roof is covered with hand-made plain tiles. This is the first tenement building to be erected in London in accordance with the terms of the Housing (Financial Provisions) Act, 1924.

Looking across the courtyard, which is paved with concrete, towards the entrance to one of the two common staircases. In the foreground are two large beds for grass and flowers. The third and fourth floors are combined into a series of two-story dwellings, so that no flat has its entrance at a greater height than three flights of stairs above the ground level.



Broxholme House, Fulham, S.W.] [*G. Topham Forrest, Architect to the L.C.C.*

A typical upper-floor plan. The dwellings are approached by external corridor balconies extending from two common staircases. The whole of the accommodation comprises twenty-six three-room dwellings, ten four-room dwellings and eight five-room dwellings, containing, in all, one hundred and fifty-eight habitable rooms. On the ground floor are also eight lock-up shops.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xiii

AN UPHILL FIGHT

BY KARSHISH

(H. B. CRESWELL)

I FOLLOWED the Managing Director, Mr. Stevenson, and Mr. Beverly Kent, the Works Manager, up an open circular stair of iron chequer-plates into the works offices—a great iron-and-glass box standing on columns within the shop, and symptomatic of M. le Corbusier, at that time under discipline of slaps now, unfortunately, remitted. Near at hand was a hot, oily, high-speed engine, with a smell recalling stewards hastening with tin pannikins, which ran the shafting distributing power to the hundreds of lathes, drills and planing machines that crowded the place. The belt engaging with the pulley of this engine sang, as it rushed round, an unending rhythmic refrain which, after a few weeks, became fixed in my head by some imp who set its hurried, alarmed outcry to the words—"We're going to go smash; we're going to go smash; we're going to go smash; we're going to go smash . . ." with a prophetic insight which would have made the history of the company a happier one if Mr. Stevenson had shared my experience and taken the hint to heart.

Directly we passed into Mr. Beverly Kent's office—where specimens from his machine-tools served as paper-weights on his dusty table, steam-radiators parched the skin, and fumes from brazing-furnaces in the shop, and the smell of warm oil, revolted lungs and stomach—Mr. Stevenson introduced me as "our Resident Architect."

Beverly Kent was formal and cold in his greeting: his Managing Director was nervous and conciliatory.

"Of course, Mr. Beverly Kent," he said, "Mr. Whistlow will confer with you at all stages and—er—report to the Board with sketches in duplicate: —in fact in triplicate, Mr. Whistlow. One set will go to *you*, Mr. Beverly Kent—through the Secretary: all your communications to Mr. Beverly Kent will go through the Secretary, Mr. Whistlow; in fact—ahem—you are here to *relieve* Mr. Beverly Kent, Mr. Whistlow—er—Mr. Whistlow is engaged by the Directors to *relieve* you, Mr. Beverly Kent."

Sheets of amazingly-drawn plans and elevations, with essentials left out and the joints of the wood-block floors drawn in and the perpends of the brickwork shown, were displayed by the Works Manager; but Mr. Stevenson seemed restive and disinclined to discuss them. He had, in fact, seen them before. They had been made most meritoriously in his redundant leisure by the Assistant Works Manager, who was not an engineer, and whose sole office seemed to be to mark the importance of the Works Manager.

Directly Mr. Stevenson left us together, as he immediately did, Beverly Kent's manner changed. He put the drawings away.

"Well, a brand new, hot-out-of-the-pan F.R.I.B.A. Architect like you doesn't want for me to tell him what to do," he said. "Mr. Stevenson thinks he knows what he wants—which is a fat lot more than I do—and if you're going to get your instructions from the Directors it's no good me telling you what *I* think. The Directors know so much, it's only a prize boy out of a school can teach them anything." He then embarked on the long history of his wrongs, for which he invited my commiseration; but as condolence involved open disloyalty to Mr. Stevenson and Mr. Hart, and the condemnation of persons I had never heard of for reasons I knew nothing of, my show of sympathy was so halting and refractory that at the end of our interview Mr. Beverly Kent had a grievance against me to put into his bag with the rest; and I left him a good deal more sore and unaccommodating than I found him. He was specially indignant at the Directors having been overborne by Mr. Billington, the late architect, who had persuaded them that cement grout—instead of sulphur as the Works Manager contended—was a proper thing for running the bases of stanchions; but as I had no experience in the matter and had never heard of any such use for sulphur, I could only meet Mr. Beverly Kent's scorn for Billington's ignorance and the Directors' weakness in being bluffed by him, with tongue-tied embarrassment.

Like the gardener who larned the frog to be a toad by chopping it up with a hoe, Beverly Kent ended by larning me to be an architect by making mince of Billington who was not an architect but a surveyor. He recounted his many lapses, with indignant contempt, to the refrain "you architects," this, that and the other; and was so rude in manner and insulting by innuendo that I came away from the most humiliating and depressing interview I have ever had with anyone. As no one could have so treated me—or have attempted it—even a year later; it is clear that in some way I must have invited or countenanced this treatment: if I had been more mature I might perhaps have taken this man into my confidence and appealed for fair treatment; but, the circumstances being what they were, my patient endurance of obstruction and vilification was probably the best course. A quarrel would have been disastrous, for it would at once have become public not only in the works but to every shopkeeper and street cleaner in the town, and would have established Beverly Kent's ineradicable enmity, so that I might never have gradually discovered, as I did, that he was a thoroughly good fellow when his failings were indulged.

It was six or eight weeks after my first meeting with him that I first cracked the ice. We were at the front of the building and he, as usual, had worked round to disparagement of my office and of the pretentions of architects. I was determined not to lose patience and, for the first time, ventured a jocularity.

"My job," I said, "is simply—I does my duty and I goes to heaven when I dies."

He stared at me, suspecting I was making fun of him; then, suddenly, he laughed.

"Come along with me and I'll show you something," he said.

He took me a few yards aside to a corner of the steaming lodge where the cooling water that was pumped round the condensers was stored, and there showed me some enormous irises and "bull rushes" he had planted, and gave me his private theories of tropical growths and his schemes for taking prizes at flower-shows with new varieties. He next took a handful of cut crystals of various colours, all flawless as glass, from his pocket. These he said he had picked up on the beach at Llandudno: amethyst, cornelian, agate—I forget the names, but they had been cut for him by a lapidary in the place; and, to point the marvel of the thing, he took from another pocket a rough, yellow stone—a "moonstone" or "cairngorm"—which had *not* been cut. I expressed my incredulity at his simplicity in terms of wonder at the fecundity of Welsh beaches; but it was the fecundity of the Welsh people that called for wonder for, as I came to learn, such crystals were bought by the bushel wholesale in Austria by lapidaries, who parted with them to the public in exchange for a pebble and the fee for cutting and polishing it—as wits unfuddled by *Tit-Bits* might have guessed. Beverly Kent's pockets were

commonly as well stored with irrelevant curiosities as his mind was, and this served to help him waste his own and other people's time when he might otherwise have been at a loss how to do so. I fancy that my advent, which robbed him of occasion to bemuse himself with building projects, widened the ground of his discursiveness instead of directing his attention to his work, as the directors designed.

When Mr. Stevenson left me in the works office he said he would tell Piggott, the Yard Foreman, now made Foreman of Works under my direction, to await me at the time-office by the gate giving access to the works; and here I found my man walking restlessly up and down.

Piggott was a clean, compact, wiry-haired, grey little man of forty or more; a sergeant of volunteers who was not merely every inch a soldier, but a soldier by so many more inches than he was a man, that his military cut and swagger were perceptible a quarter of a mile away and, at close quarters, were aggressive. The ability of this touch-me-if-you-dare soldier-man to give orders, and see them obeyed, was unquestioned; but, unfortunately, he had to take orders from me, and he had learnt, only too thoroughly, that it is more blessed to give than to receive. He was a thoroughly capable general foreman for such work as was required of him : a first-rate organizer, and a thoroughly honest, self-respecting man—if rather a shifty one; but to the end I never had his perfect loyalty. I knew he disparaged my methods and discredited me on all occasions; and his restiveness and recalcitrance dragged upon me like a weight, and made heavy going of work that should have been a pleasure. He dutifully and competently did what he had to do; but, though he dared not overstep the mark, he had an ugly, surly, resentful temper and, in fact, never gave me more than the grudging obedience of a trained lion.

I have said that on the few occasions when I have allowed my feelings to take control, I have always gained my point. My first step in the taming of Piggott was one of these occasions. It happened about a fortnight after I took over at Albion Works, when one morning I met the man and questioned him about some work he had in hand. I saw that he was not exactly following my particular instructions; he had previously demurred to them, and when I now clearly repeated what was to be done, he nodded moodily and walked off. There was something so infuriating in the resentful air with which he turned, and in his squared shoulders and swaggering gait, that I let my anger rule. Why should I allow this fellow to annoy me !

" Come here ! " I called.

He half-turned and looked blankly at me over his shoulder.

" Come here ! "

His gaze fell, and he dragged himself round with an air of boredom, and strolled slowly back over the half-dozen paces that separated us, and stood before me.

" You wish to speak to me ? "

" Yes. You've got to change your ideas—at once."

" Oh ? "

" You've got to learn that I'm appointed to control building operations here, and that you are under my directions."

" Mr. Stevenson told me that."

" Well, I've got something else to tell you. I *mean* to control the building operations, and I intend that you shall *follow* my directions. Can you understand *that* ? "

" Well, is it likely . . . .? "

" Answer my question ! Do you understand what I say ? "

" Of course I do."

" Right ! Then here's something more for you to remember. Your appointment as Foreman of the Works was made with my consent; and I am responsible to the Directors for your work . . . ."

" You've no grounds . . ."

" —Listen to what I say ! Unless you do what I want and *as* I want it done, Mr. Stevenson will either have to fill *your* place, or fill *mine*; have you got that clearly ? "

" I don't see what reason . . ."

"— That's nothing to do with me. I've told you how things are; now go off and get on with your work."

" I should just like to . . ."

"— Go back to your work."

He turned, with a slight loss of colour, and walked doggedly off, and at that moment, although I was trembling with the stress of the scene—for the man might have brought things to a climax by a show of anger or impudence—I felt sorry for Piggott, and distressed at having humiliated him. However, something had to be done; and in those early months one misery or another was my lot at Albion Works, whatever I might do. I could only be thankful I had not used greater violence, for curses were in my voice, which sounded strange and shrill in my ears, and several times almost upon my lips.

Men who will gladly take responsibility and use initiative are rare and to be made the most of; and I soon found that I got the best out of Piggott when I gave him his own way or let him suppose he was getting it, and when I told him fully the exact reasons for work that was required of him. I allowed him to gather particulars of the odds and ends of building that were wanted and, so far as I was able, embodied his proposals in my orders to him; and I used to show him work being laid down in drawings and invite his observations. It was a great nuisance having to nurse his vanity in this way—though I stopped short of feeding it ; but his self-dependence and knowledge of the needs of the place was invaluable, and by flattering his importance I had the full benefit of it. One circumstance well displays his pig-headed character. It would have suited me admirably, and have been to his advantage, if I could have employed him to overlook work done by contractors; but any such idea was quite out of the question—as Mr. Stevenson agreed. Piggott would so completely have upset the apple cart that we might have found bloody noses and black eyes being exchanged almost as freely as how-d'ye-dos.

My first step towards getting things started was to secure—by advertisement—a provincial quantity surveyor's clerk and one draughtsman; and to put in hand a survey of those parts of the works to which additions were immediately needed. My first actual job was a Building Yard with joiner's shop and stores, and an office for myself and staff, next it. These buildings were outside the inner fence that surrounded the works—a point stressed by Mr. Stevenson as though to mark the essential impurity of an architect's presence among engineers; in fact I seemed to be, in his eyes, a Hindoo ryot on the banks of the Ganges, and his Albion Works a sacred cow—gravid with reapbinders — whose hallowed flanks I must not too nearly approach. In this, my first building, which was run up by Piggott from my careful drawings and specification in a very short time, I had to test my teeth on a hard little nut.

The site sloped away sharply, and the yard had to be levelled up by filling six or seven feet deep against a fence wall ninety feet long between returns, which was thus constituted a revetment. I possessed a student's knowledge of the theory of revetments; I had reference books to my hand; my familiarity with graphic statics would have enabled me to turn off an answer to such a problem, if presented in an examination paper, in a very short time, and to gain full marks for it. The accomplishment of the thing was therefore, it may be supposed, a very simple matter. It was, in fact, nothing of the sort; and it is the startling difference between knowing how a thing is done and knowing how to do it, with which I was then for the first time confronted, that has led me to recount the experience.

In examination an architect may justify himself from the pages of

Rivington or Mitchell; but when he gets to work, he is in the position of the German naturalist in Kipling's story, who, bitten by a deadly snake for relying upon the authority of one "Breitmann" that coral snakes were not poisonous, exclaimed: "I am a dead man und Breitmann he haf lied in prind"—he may justify himself from books, but if he gets bit he must take the consequences, and those consequences are often serious.

My problem was not touched by the books—no problems of actual work in my experience ever are. I had to settle for myself the angle of incidence of the spoil used for filling, which was a clay that would stand like a wall in a six-foot trench, melt and crumble away after a week's exposure to the air, disintegrate into mud when dug and thrown out, and crack and split up into blocks under drought. How would such spoil behave when it was rammed against a retaining wall, and was then swelled by damp; and how if it disintegrated and flowed? Would it absorb water and so double its weight; and, if so, could such water be drained away through the wall? Would the mass shrink away from the wall-face in dry weather so that it had no support, and then break away and fall against the wall? How far were these risks actual chances, and how were they to be adequately met without needless extravagance? If I employed ties and anchored the wall to plates or concrete blocks buried in the ground, for how long could the bolts be relied on to withstand corrosion and remain effective?

It will be seen that I was confronted by a problem of civil engineering in miniature. The measure of my failure might be, indeed, only two hundred pounds in cash; but if it had been twenty thousand I could not have taken my responsibility more seriously, and the gentleman whom I have imagined as marking my paper "O.K. 10" would have been entirely unaided by theoretical or book knowledge, in deciding the question for me. However, if he had been at hand he could not have settled the question; for I was responsible, and any decision must be mine. As for Piggott, I got his approval of my proposal after I had completed it; for even in those early years I had realized the danger and folly of urging any craftsman or foreman to undertake work the efficacy of which he has any doubts about. What happened was, that I laid my sketch design before the Board for approval, and Hart, after looking at it half a minute, said:

"Your wall will fall down, Mr. Whistlow."

There were six of them there that day, and they looked at me dully. Peterson exclaimed, "Oh, I say!" as though I were convicted of embezzlement.

"I think not, sir," I said; but Hart had pushed the drawing over to the chairman and was whispering to him.

Mr. Stevenson then said, as he wrote the words in the minute-book, "Ahem. Plan to be amended after reference to Mr. Hart and laid before the Board on the 19th. Ahem."

That, I may say, was all in the day's work; what I call attention to is this: I was a novice, and I was not an engineer; Mr. Hart was an eminent engineer, and the problem was one of engineering; yet, because I had, in my own way, completely mastered to my satisfaction the practical considerations bearing on the problem, and had formed a clear opinion of an adequate and economical solution of it, I found myself confident in my judgment, and indignant with Hart for putting me down, as he had done. The fact that I knew myself helpless to deal with the theoretics and mathematical refinements he was master of, did not weigh with me in the least: I had concentrated on that revetment wall till I knew as much of what it could and could not do, as I did of my own legs. Hart might order me to do differently; but I should be right, all the same.

Hart, however, did not order me to do differently when next day I went to him with my notes and calculations. He had not got the whole of the facts when he condemned the design, and he was unable perfectly to assimilate them during the few minutes I occupied in unfolding them; but he could not controvert them, and he was, perhaps, impressed by my ardour. At any rate, he very handsomely said that he quite agreed the design would do well enough; and excused himself on the ground that he had overlooked the weight of the superimposed wall as a component of the moment of stability.

I mention this small matter because the experience taught me the surprising incompleteness of theoretical knowledge; the nature of the concentration to which problems of construction yield; and the confidence and sense of power which the solution of them gives. It was, in fact, a fortunate circumstance that, at the outset, I should thus have justified myself; for I was immediately to encounter two great disasters, and although they were due rather to misfortune and to the unfavourable conditions in which I worked than to any remissness on my part, I was to endure months in which I felt that the confidence of the directors in their Resident Architect was in danger of being seriously shaken.

NEXT WEEK: XIV—A DISASTER

The previous instalments appeared as follows:

May 27.	i:	I am Articled.
June 3.	ii:	Episodes of Pupilage.
June 10.	iii:	Episodes of Growth.
June 17.	iv:	My First Job: The Sewer.
June 24.	v:	My First Job: The "Pipes."
July 1.	vi:	I Turn Clerk of Works.
July 8.	vii:	Bradshaw & Son: Builders.
July 15.	viii:	Joe Richards: Foreman.
July 22.	ix:	Trials of a Clerk of Works.
July 29.	x:	A New Venture.
Aug. 5.	xi:	The Resident Architect.
Aug. 12	xii:	An Architect's Early Gruel.

LETTERS FROM READERS

The I.A.A.S.

SIR,—I have pleasure in accepting Mr. William Davidson's thanks. He has left my question unanswered.

Mr. Noah, apart from being the Patron Saint of Architecture, may also be claimed as such by the Zoological Society, marine engineers, etc. I also note that Mr. Noah was a builder as well as an architect. I endorse Mr. Davidson's hope that the R.I.B.A. will note my remarks concerning a practical architect; it would seem that he prefers the theoretical one who has crammed to pass an examination.

I am only too happy to have been of some service to Mr. Davidson, and am sure that he would appreciate further assistance, so suggest that when he is "often asked by anxious parents regarding the best training for pupils," he directs that the pupil should be sent to a good builder to assist in and obtain a knowledge of construction, and thence the visit to the mason's yard.

His assumption regarding the senior architectural degree is correct, and Mr. Davidson should not think, but as he sought information concerning the I.A.A.S., he should likewise seek in other directions. Mr. Davidson should read the last paragraph of my reply again; he surely does not wish me to give him the meaning of the word "older." I am at a loss to understand what he means by "not to adopt any intelligent methods of securing commissions"; perhaps he would be good enough to explain, as no doubt many of your readers, Sir, need enlightenment.

In reply to Mr. J. N. Aylwin, he was probably not *au fait* with my reference to a builder in my reply to Mr. Davidson, but no doubt Major G. B. J. Athoe's letter helps to explain. [See issue for August 12, page 212.—ED.].

I am entirely in sympathy with and absolutely agree with Mr. Aylwin's remarks regarding poor work produced by builders, and they are not the only

culprits, but my reference was specific rather than general.

Answering the last paragraph of his letter, surely an association or society should offer some measure of protection to its members, and I suggest that the I.A.A.S. has made its contribution in protecting the public in its efforts under the Registration Bill.

WILLIAM HORSMAN

Pedestal Basin

SIR,—On doing up a house I have just taken, I told my builder that I wanted a pedestal basin in the bathroom, because I disliked a lot of pipes, which only serve to accumulate dust, and probably dusters too. My builder agreed, and took me to his builders' merchant to make my selection. We selected a standard pattern. Visiting the house during the progress of the work, I found the pedestal basin duly installed, and all the pipes gaily curling themselves about *outside* the pedestal. I protested that either the pipes should go inside or I should not pay for the pedestal. My builder thereupon took the pedestal away and boxed in the basin as a cupboard. When the bill came in, this was charged for, and, on my pointing out that it was, so to say, his funeral, he replied as follows: "I have personally been through several new properties, and in all cases have the pipes been fitted outside these pedestal basins. On my taking up the question with various builders I am told to connect them inside is not at all practicable."

In spite of the unanimity of the builders, I should value any of your readers' opinions as to whether it is I who am unreasonable or merely the makers of the basins? N. C.

Research Fund

SIR,—The Research Committee of the Institution of Heating and Ventilating Engineers was resuscitated last October for the purpose of organizing a fund to assist the Government Department of Scientific and Industrial Research in its projected research on heating and ventilation at the Building Research Station, Watford.

In 1928 an important link was forged between industry and science in the formation, by the Department of Scientific and Industrial Research, of a Standing Advisory Committee on Heating and Ventilation. It was intended that the work on heating and ventilating problems should not only be directed along lines which should prove of direct value to the industry, but also that the results should be available as soon as they were obtained.

The Department's Standing Advisory Committee consists of the following members:

Messrs. Raymond Unwin, D.TECH., President-Elect R.I.B.A. (chairman); C. G. Douglas, C.M.G., M.C., F.R.S.; A. C. G. Egerton, M.A., F.R.S.; E. Griffiths, D.SC., F.R.S. (National Physical Laboratory); J. A. Macintyre, O.B.E., B.SC., M.INST.C.E.; W. W. Nobbs, M.I.MECH.E.; J. Roger Preston, M.I.MECH.E.; C. W. Price (Home Office); A. Scott, M.B.E., D.SC., A.R.I.B.A. (Office of Works); F. S. Sinnatt, M.B.E., D.SC., F.I.C. (Assistant Director Fuel Research Staff); and Margaret Fishenden, D.SC.

The work which has been carried out so far (by the aid of Government grants) has aimed at the general elucidation of factors which determine the efficiency of heating in a building.

In the course of this investigation, work of great interest has been carried out on heat losses experienced with different methods of heating. At present, however, such work can only be carried on very slowly, because in the present experimental house all the effects of varying weather conditions upon heat requirements must necessarily be studied at the same time. It is not possible with so many variables to speed up such investigations, or to simplify conditions by the control of individual factors.

In view of these experimental difficulties, a proposal has now been made to construct at the Building Research Station a "Controlled Weather House." In this house, the walls, floors and ceilings of an experimental room of practical size are to be exposed to controlled conditions by enclosing such room within a larger structure, the temperature of whose walls can be artificially maintained.

With such installation the study and comparison of different types and dispositions of heating systems would be greatly expedited.

The estimated cost of the "controlled weather house" and its equipment is £1,800 to £2,000, and in order that a case can be made out for the undertaking by the Government of financial responsibility for the erection and maintenance of this new building, it is absolutely essential that the industry proves its interest by contributing towards the cost. Without some such practical form of support it would be quite useless to expect the Government to proceed with this undertaking.

The I.H.V.E. has voted from its general funds a sum of £100 (spread over a period of five years) towards the Building and Equipment Fund. The Research Committee has also received other promises amounting to date to £200 towards this fund, and the promise of Investigating Work in the new house to the value of £1,000, likewise spread over a period of five years.

The Council of the I.H.V.E. appeals to the heating and ventilating and allied industries for such contributions to the Building and Equipment Fund, and promises of Investigating Work, as will justify the Department of Scientific and Industrial Research in embarking on this undertaking.

Contributions and promises should be sent to the Secretary of the Institution of Heating and Ventilating Engineers, 12 Russell Square, London, W.C.1.

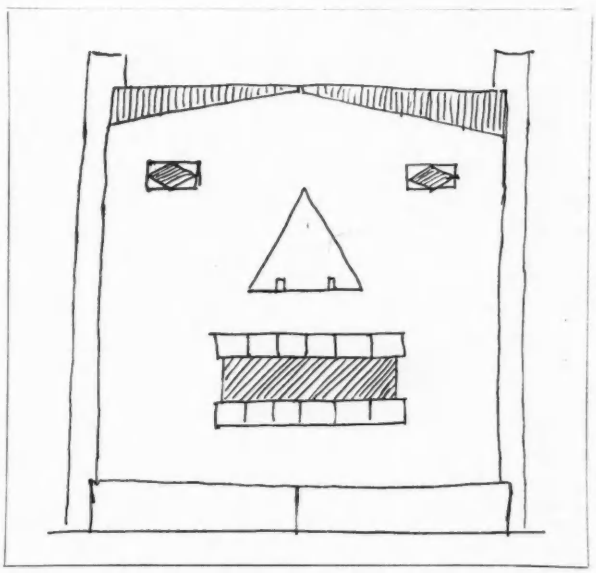
WALTER W. NOBBS
(CHAIRMAN, I.H.V.E. RESEARCH COMMITTEE)

Partiality for Asparagus!

SIR,—Sir Edwin Lutyens, in referring to a recent modernist building, said it seemed to suggest a partiality for asparagus on the part of the client. Your "Selected Precedents" featuring the horizontal window suggest, perhaps, a weakness for washing day or alternatively rows of false teeth.

The possibilities of suggestion have not been fully realized in the examples illustrated, and I enclose a sketch in which the false teeth motif is more fully developed.

M. H. BAILLIE SCOTT



An alternative to the horizontal window? A sketch, by M. H. Baillie Scott, in which the false teeth motif is fully developed.

C

OLD COTTAGES

Their Care and Enlargement

FOLLOWING are some extracts from *Old Cottages*,[1] a booklet containing practical notes on their care and enlargement, recently issued by the Somerset Rural Community Council :

EXTERNAL FEATURES : ROOFS

Tiles : The stone-tiled roof—that most beautiful of coverings next to thatch—is often removed, the tiles sold and the house covered with a flaring red tile—perhaps even an asbestos tile. If it is too costly to relay or renew the stone tiles, at least the roof should be covered with a soft dun-coloured tile of simple pattern. Even an asbestos tile, if of russet colour, might be used at times. There is also the pantile, much more freely used in the Eastern counties than in Somerset—and if it be thought that it is only fit for outhouses and pigsties, let it be remembered that it is now being used on some of the best buildings in the country.

Slates : Many of our older houses and cottages, especially in the neighbourhood of Taunton, are covered with Wiveliscombe slates. Of late years there has been difficulty in obtaining this slate, but a quarry has recently been opened, which is said to be of good quality. The "seconds" quality of the Cornish slate in the neighbourhood of Delabole are very suitable for repairs and can be obtained in any sizes. Some of the beds are tinted with deposits of red, yellow or blue colour, but the best, after all, are the plain grey.

Thatch : It is worth a great effort to repair or renew a thatched roof wherever possible. Few people seem to realize the lasting qualities of a good thatch. Well laid, of good wheat straw, it has, to start with, a life of twenty-five years, with renewals to the heading of the ridge, but in reality a life far longer than that and at little cost for repair.

It ought not to be necessary to point out that there is nothing cheap or vulgar in the use of thatch. In parts of East Anglia it is used for the roofs of churches, some of considerable size and most of them of great artistic and architectural importance. There and elsewhere it is much sought after as a covering for houses by those who can afford it, not only because of the beauty of its appearance, but because it is so comfortable to live under, being warm in winter and cool in summer. Of course it must be kept in good order. If that is done, it must be reckoned as a luxurious and not as a "common" roof covering. It is not wise to use it on main roads, in towns, or near railways, on account of the additional risk from fire. There is now a method for fireproofing, however, which will render it safe for a time under all ordinary circumstances.

Galvanized Iron : When galvanized corrugated iron has to be used, it should be painted a dark grey—never red—with an iron oxide paint, and its life is considerably lengthened by painting it underneath as well as on the top, as condensation takes place rather freely on the underside of the bare iron. As suitable paint can now be obtained from Wallis Dove of Hull for coating new galvanized iron, it should be painted before as well as after fixing, as many parts, especially underneath, cannot be got at when it is once fixed.

PATHS

These are important : much of the beauty of a garden depends on them. They should not be too wide. Main approaches must be kept in safe condition for use, but old paving should be scrupulously retained wherever possible. Slabs of slate, lias, oolite or sandstone are traditional in some districts, while in others a hard gravel path or cobble stones are the rule. Such arrangements should be carefully maintained, as many of them are probably very old. While the tradition of irregular flag pavement should be retained where it exists, care should be taken not to copy what is known as "crazy" pavement. There ought to be nothing suggestive of a sham antique, and no modern pavement ought to be impractical or dangerous. Asphalt, concrete and smooth tiles should be avoided, but ordinary walling bricks set on the flat can be used in some places. Where concrete is unavoidable it should be brushed over while still soft with a coarse brush. Tile edges or verges are out of place as a rule, but where stone edging is traditional the custom should be maintained : old stone tiles set on edge are suitable and economical. Paths should not be excessively rounded on the surface. Narrow paths should be made all round ancient or important buildings, as their proper maintenance is promoted by ease of access.

INTERNAL FEATURES

Decayed Timber : For some reason worm more readily attacks timbers where the beam-ends are built into the walls. Damp here also affects the beam, and these two causes together often cause partial or entire failure in a beam otherwise sound.

Where this decay has proceeded far, the usual method is to cut away the rotten end, and to scarf and bolt a new timber-end on to the old. This is not a satisfactory method, even if well done, for it still leaves the new timber under the same undesirable conditions.

Sometimes the ends of the new timber merely rest on the walls, with the sides, ends and top of the timber left open for ventilation. This method has various disadvantages, especially because such mere resting on the walls provides but a slight tie for them, and the tie afforded by beams to old walls, especially if they are already out of

[1] Published by the Somerset Rural Community Council, 42 Bridge Street, Taunton. Price 1s. net.

Photographed by F. Frith & Co. *Illustration from* The Cottages of England *By Basil Oliver. Published by B. T. Batsford, Ltd., 15 North Audley Street, W.*

At Nunney, near Frome, Somerset, showing the Castle in the background.

Photographed by F. Frith & Co. *Illustration from* The Cottages of England. *By Basil Oliver. Published by B. T. Batsford, Ltd., 15 North Audley Street, W.*

At Westford, near Wellington, Somerset.

plumb, is important. The following method is proposed :

Support the beam by means of props, cut off the end of the beam where too decayed to be useful—often it will be found that the part to be cut off does not extend more than a few inches from the wall face—then carefully rake and brush out any smaller rotten parts which extend farther along the beam : and treat generously with Solignum. Open out the original hole in the wall and enlarge it to, say, twice the size, by taking out odd bricks or stones—irregularity is no disadvantage. Clean out all dust and wood fibre and well wet. Then insert in the hole a short length, as necessary, from two to three feet long, of channel iron or steel, whose width is as near as possible the width of the beam. The depth of the channel will be in proportion to the width and is immaterial for this purpose. Two holes, about ¾ in. in diameter, should be drilled as widely apart as possible and about six inches from the inner end of the channel. The beam will rest with its bottom face in this channel, and two ¾-in. bolts will be passed upwards through the channel and the beam and fixed with nuts and large washers on the upper side of the beam. The end of the channel is then thoroughly concreted round with fine cement concrete, finished flush with the face of wall, and similar concrete should also be carefully pressed into such recesses in the beam as have already been cleaned out.

Such repairs are satisfactory and simple to carry out, with the advantage that a thoroughly good tie is maintained, the steel channel acting both as a corbel as regards the wall, and as a continuation of the beam as regards the tie.

ADDITIONS

Pitch of Roofs : It is of general importance to maintain the level of the original eaves lines and the ridge of the roof lines, and to maintain the original angle of the slope of the roof.

Flat angles or pitches are practically never found in this county, and therefore the temptation to use them should be resisted.

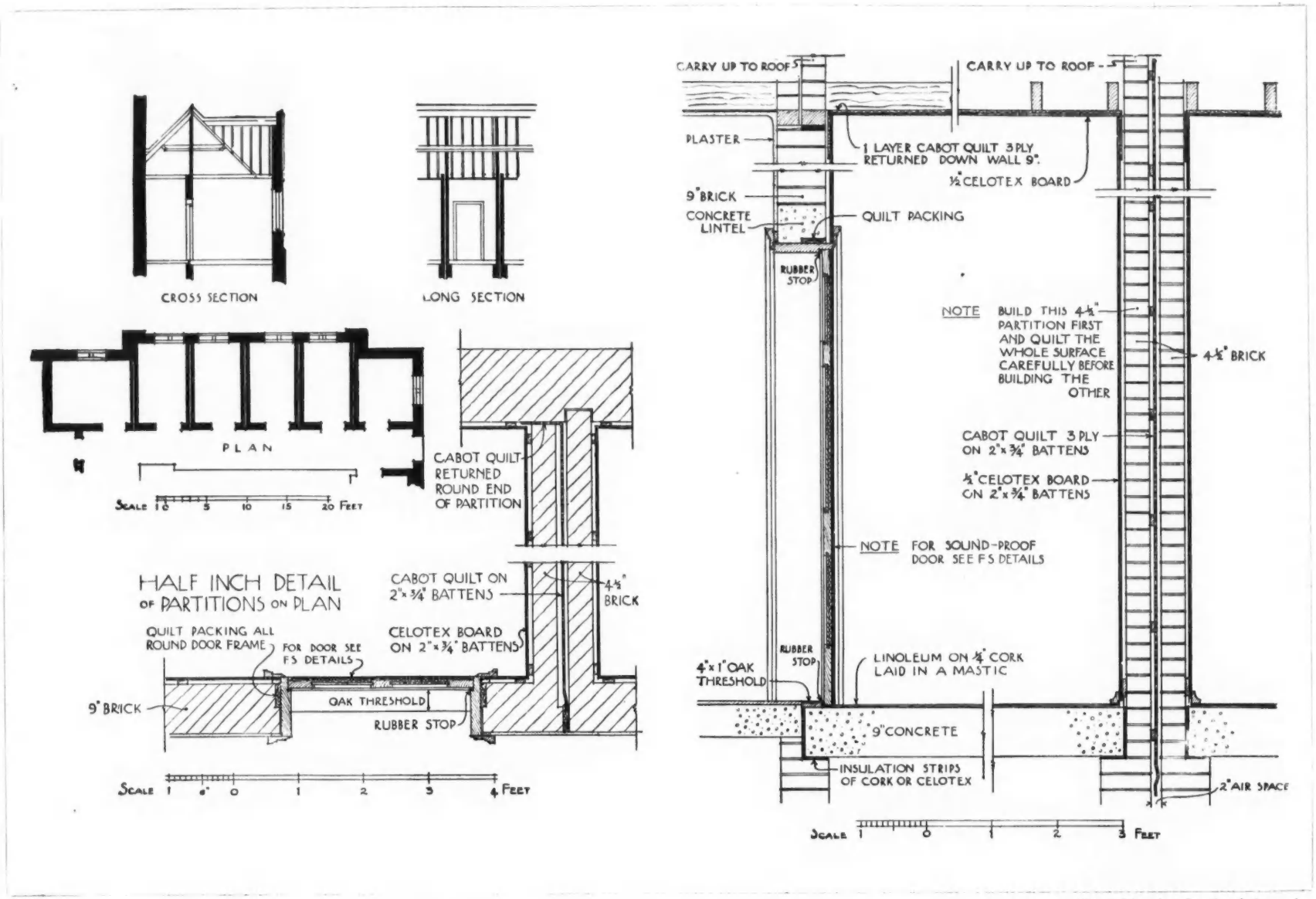
In recent years a favourite pitch is that known as the square pitch of 45 degrees, and this is the minimum pitch to be safely used for plain-tiled and stone-tiled roofs, but except in gables of over 20 ft. span it is not quite steep enough for the best effect. If this eaves angle be increased to 50 or 55 degrees, the extra expense is slight and the appearance is considerably enhanced.

Supposing the span of the addition is at right angles with the span of the original roof but less in width, if the eaves line and the ridge are to be maintained at the same relative heights as before, the pitch of the new roof will be steeper than that of the old, and this will look correct; if, however, the new span is greater and the heights are the same, the pitch will be less steep and, in proportion to the difference in span, will look less correct, so that, as an alternative, it is better to maintain the eaves height and raise the new ridge line. New gables should be treated as the old, i.e. if the old roof were hipped the new should be also, unless there is obvious advantage in not doing so. Incidentally, and as a point of little regard in this country, when a roof is hipped, the slope of the narrow ends should always be slightly steeper than that of the longer sides o the roof. Where special close-fitting hip-tiles are used, this alteration of pitch is difficult, but where half-round hip-tiles, or lead-covered hips are used, the alteration of slope presents no difficulty, nor does it make any difference in a thatched roof, where the pitch should never be less than 50 degrees.

Proportion of Windows : As far as possible, the dimensions and proportions should be nearly similar. For instance, if the original distance between mullions be 14 ins., to increase the distance in the new one to 16 or 18 ins. is a serious error, and, indeed, a slight variation in height is far less serious. To increase the size of a mullioned window by increasing the number of mullions is, in reason, a sound method. The increase in width of a sash window is nearly always bad in appearance and worse in practice, as the sashes tend to bind in working if the width is great in proportion to height. An increase in height within small limits, and with careful height alignment with the old, is permissible.

Photographed by] *[Whitcomb and Son, Yeovil.*

Houses at Stoford, Barwick, faced with grey plaster and red corrugated iron roofs.



[*From* Planning for Good Acoustics.

Plan, section and details of sound-proof partitions; and detail sections of sound-proof partition and door at Bromsgrove School. J. Bilson, Architect. (See "Literature" on facing page.)

LITERATURE

PLANNING FOR GOOD ACOUSTICS

NOT many textbooks survive to lighten darkness far into the future. Those that do—and I call to mind Anderson's *Greek and Roman Architecture* or Ward's *French Renaissance*—give some addition of the author's own making to the compilation of textbook matter, whereby the imagination is stirred to a response that lightens dull fact.

This book I feel to have been born under the like happy augury. Its subject, in essence a science, only arises where architecture, half science, half art, is concerned; and arises most potently when music fills the spaces of architecture with sound.

The gods therefore must have conspired together to lead to this work authors in whom were combined, with powers of scientific investigation and deduction, a feeling for architectural form, an ear for music, and a sense of humour: unusual qualities that have produced a textbook of more than usual worth.

The study of acoustics is a science bound up with building. It is the study of the behaviour of sound waves in enclosed or partially enclosed spaces. Applied to the study of architecture, it involves the control of sound waves through the arrangement of bounding surfaces, materials and structure. It is therefore a science which, though only recently exalted, has its roots firmly embedded in the fabric of architecture, and it is because this book succeeds in making the diligent architect "acoustically-minded"—if I may use such a term—that its value is unlikely to be diminished with time.

The book opens with a development of the properties of wave motion, leading to an account of the early experiments out of which Sabine's formula was evolved. This evolutionary picture is too clear to be forgotten, and one proceeds to the application of elementary laws with the zest which only understanding can bring.

Throughout the body of the book the authors make use of buildings which they have themselves tested and of which they produce in nearly every case their tabulated findings, so that as one moves, chapter by chapter, to consider different types of buildings—churches, theatres, buildings for debate and so on—growing knowledge is grounded upon historic fact.

Gradually one begins to understand how completely interwoven with the fabric of architecture is this question of sound; each so much the counterpart of the other as to make a concert hall no less an instrument than the orchestra that fills it with sound, to unite for ever the Thomaskirche with the music of Bach.

I cannot overestimate the effect which this careful and intimate analysis of known buildings produces upon the reader to heighten and make vivid his appreciation of the nature and application of acoustics. I can only say that I have never before approached a subject of which I had previously little knowledge with more real enjoyment and positive understanding, and feel that the full effect of the book is bound to be felt in the near future as a clarifying influence upon the study of modern architecture, especially, one may hope, in the R.I.B.A. new premises, where we have the opportunity of setting high standards of architectural acoustics.

If the control of the waves of spoken and of musical sound is the major subject, its enlargement to deal with the control of noise is very important to a traffic-ridden, mechanical age, and the chapters that deal with sound transmission and absorption must widen the scope of the book to include among its readers those who might never hope to build a theatre, or think to study acoustics in the large. It is, indeed, as a textbook, complete; and it is therefore hardly necessary to say that its index and appendices are models of their kind, its illustrations clear and well drawn, its format without fault.

E. MAXWELL FRY

Planning for Good Acoustics. By Hope Bagenal, A.R.I.B.A., and Alex. Wood, M.A., D.SC. London: Methuen & Co., Ltd. Price 22s. 6d.

OBITUARY

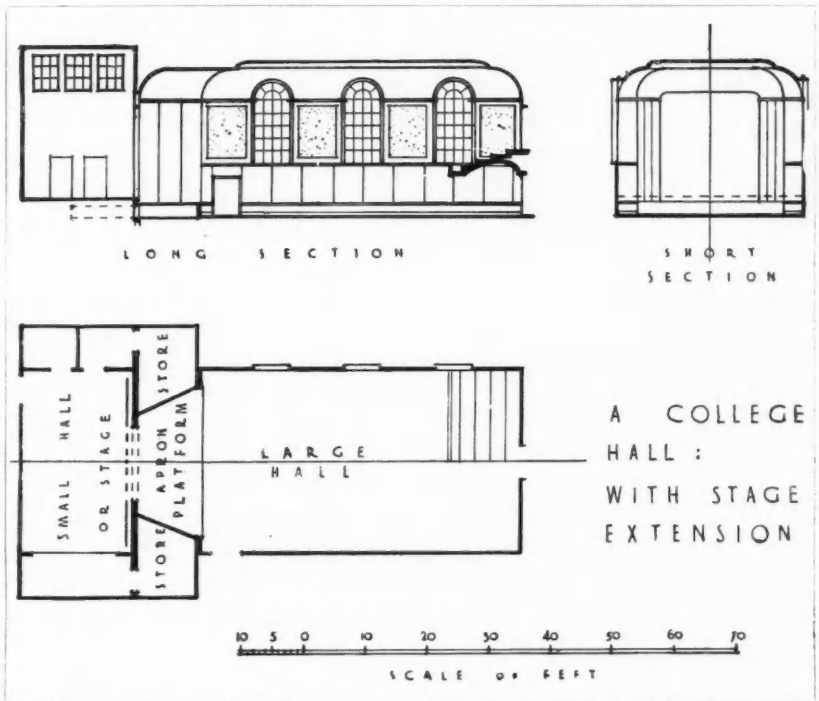
COL. A. E. KIRK, 1868–1931

WE regret to record the death, at the age of sixty-three, of Colonel Albert E. Kirk, V.D., O.B.E., F.R.I.B.A., which occurred at Alwoodley, Leeds, on August 9. For many years he had practised in Leeds, as head of the firm of Kirk and Tomlinson.

Colonel Kirk was president of the West Yorkshire Society of Architects in 1912, and again in 1926, the society's jubilee year. He had been an associate of the R.I.B.A. since 1892, and took up his fellowship in 1927.

Among the principal works executed by his firm were the following: Numerous business premises in Leeds, including a large block of offices in the New Headrow, an important factory at Kirkstall, and many large houses in the West Riding, Northants, and Wales.

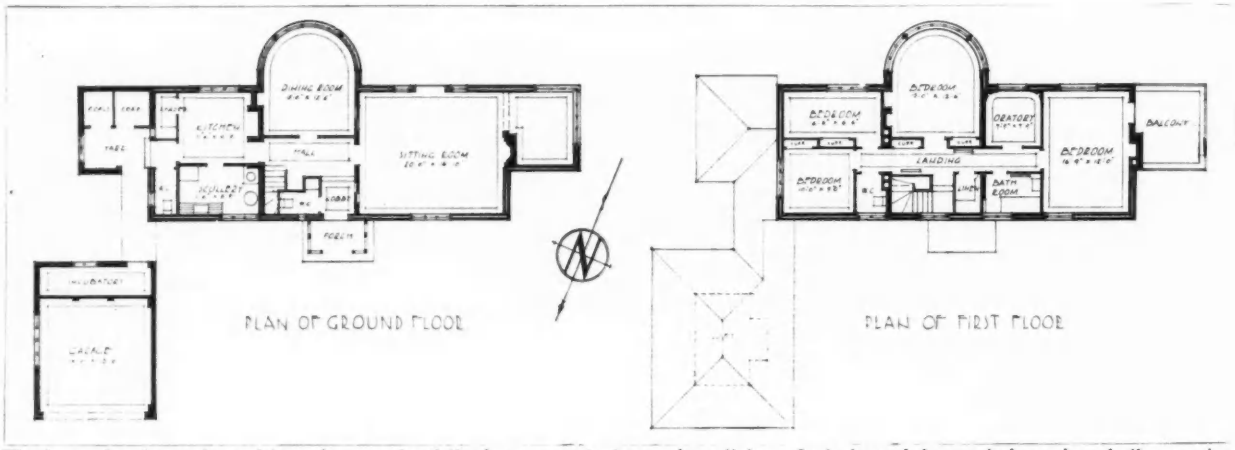
His military service covered a period of nearly thirty years, and he rose to the command of the 7th Battalion, West Yorkshire Regiment, with which he was on active service in France during the late war. He was once wounded, but returned to the Western front, being afterwards mentioned in dispatches.



[*From* Planning for Good Acoustics.

Sketch plan for a college hall, suitable both for choral music and for theatrical performances.

Plan, section and details of sound-proof partitions; and detail sections of sound-proof partition and door at Bromsgrove School. J. Bilson, Architect. (See "Literature" on facing page.)



The house has been planned in order to take full advantage of view and sunlight. It is heated by an independent boiler, serving radiators which are recessed in the walls and concealed by metal grilles. Water is supplied by an automatic pump.

HOUSE AT

DESIGNED BY WELCH,

The garage from the north-east, with the house in the background. The garden has not yet been laid out, but work on it is now being carried out.

THIS house, at Colyton, Devon, is situated on the top of a hill, from which a fine panoramic view is obtained over the Axe valley stretching from Axminster, down over Axmouth and out to sea. In order that, in its conspicuous position, the building should fall naturally into the landscape, it has been modelled on the local thatched and colour-washed cottages, and traditional materials are used as far as possible.

The view being fortunately north-east to south-west, it did not conflict with the aspect of the rooms. The planning was, therefore, a fairly simple problem, and the house was arranged so as to take

A general view of the main front from the north-west. The walls are of the cavity type, rendered externally as a protection against the driving rain. The casements are of wood; and the roof is thatched with Norfolk reeds, with elm gutters and down pipes. On the left of this photograph is seen the garage, also thatched.

Looking across the sitting-room, towards the entrance hall. The door seen is of the ledged and brace type, with an oak latch.

The walls of the dining-room, like those of the sitting-room, are unplastered. The windows afford magnificent views.

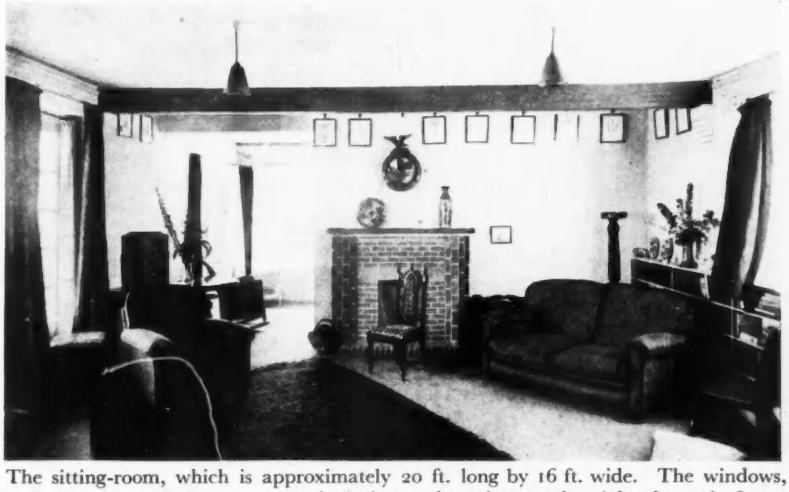
COLYTON, DEVON

CACHEMAILLE-DAY AND LANDER

full advantage of both view and sunlight. The aspect also enabled the main windows to be kept away from the prevailing winds.

Brick cavity walls were used, rendered externally as an additional protection from the driving rain, to which the house is subject; the wood casements are of a special section, with the same end in view. The thatch is of Norfolk reeds with elm gutters and down pipes. Extreme economy had to be observed, with the result that all the finishings are of the simplest nature.

The garden has not yet been laid out, but this is being done in consultation with the architects.



The sitting-room, which is approximately 20 ft. long by 16 ft. wide. The windows, including those of the recess, overlook the garden; that on the right the main front.

The garden front. The circular bay, housing the dining-room with a bedroom over, is supported by reinforced concrete lintels and stanchions, to permit of the greatest possible expanse of window. The door shown gives direct access to the sitting-room, the largest in the house, which embodies the one-story projection on the left of the illustration.

THE SPECIFICATION WRITER

Ventilation by Anemostat

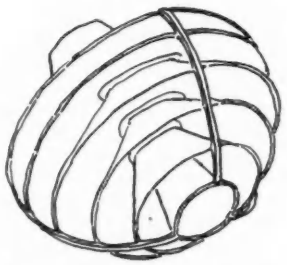
THE architect, in designing public buildings, must satisfy those who like fresh air at all costs as well as those who would rather stifle than feel the lightest breeze blowing about their foreheads. The common method of specifying an intake panel behind each radiator, with extract vents at ceiling level for the removal of foul air on the principle that hot air rises, ignores the disconcerting fact that in this country during several months of the year the air outside the building is hotter than that within. The hot fresh air of summer ought by rights during those months to come in at the top and the cold foul air to go out at the bottom—but does it?

In theatres and cinemas an artificial system is necessary which can be regulated not only according to the external temperature but also to the varying heat caused by the number of people present.

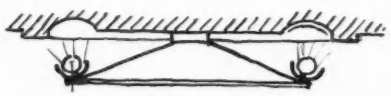
The first essential consideration of such a system is whether the change of air shall take place in an upward or in a downward direction. If the building is to be lit by gas an upward system is essential, since the heat from the burners will prevent the descent and consequent circulation of fresh air entering at a high level. The now obsolete roof ventilator with the ring of gas jets was designed to hasten the change of foul air by rendering the upper strata hotter and more anxious to escape, but the amount of oxygen consumed by this method was out of all proportion to the circulation, and the "gods" who could hold out through a long play under such conditions were truly super-men.

With electricity it is possible to control the ventilation scientifically, and the architect will probably find it best to specify a downward system, since the dust will not be drawn up with the fresh air to the breathing level of the audience. The L.C.C. requires the provision of 1,000 cu. ft. of fresh air per person per hour; therefore in a theatre for an audience of 1,500 people the volume of air required will be 1,500,000 cu. ft. per hour, or 25,000 cu. ft. per minute. This air must be cooled or warmed to the right temperature of about 60 deg. F., and cleaned, before being introduced into the auditorium at definite points. The three essential parts of such a system are therefore (1) the air-conditioning plant, (2) the ducts, (3) the inlet and extract vents.

The conditioning plant will require an intake high up to allow the air to be drawn in as fresh as possible, but in any industrial town the freshest external air will need treatment to remove impurities. The ducts from this fan room require very careful consideration, and are best specified to be incorporated in the structure. Two of the most common materials used for this purpose are galvanized iron or a cement duct on a latticed reinforcement. Care must be taken in calculating the sizes of the ducts that the large main trunks are of sufficient area to give the required cubic feet of air change to all branches at the same time. Not only must all bottle-necks be avoided but also guiding baffles should be inserted at any sudden change of direction to prevent loss of velocity. If carefully considered at the outset, ducts can be concealed in floors and walls, and unsightly ventilating plant in any building is usually due to lack of foresight on the part of the architect.



The Anemostat in perspective.



Sectional sketch of the fitting seen below.

The introduction of the air into a theatre is the most difficult problem. In the auditorium mentioned, 25,000 cu. ft. has to be pumped in per minute without creating a draught, for a draught can be as unpleasant from hot as from cold air. This difficulty is now overcome by a simple invention called the Anemostat, which has been used with success both in Germany and in this country. It consists of a series of cones placed one over the other like the rose of a watering can, fitted at the outlet of the duct. The incoming air is thus spread over a hemispherical range at an angle of about 180 deg. instead of pouring straight into the hall, and this allows the full volume to enter without draught. By means of these spreaders the air in a hall or theatre can be changed fifteen times in the hour without creating unpleasant currents.

The interconal spaces are so arranged as to suck in a portion of the warm air of the room and mix it with the fresh air in the apparatus before it is discharged among the audience, thus the emerging air is at a higher temperature than when it enters the duct from the conditioning plant. This is a very valuable feature, and minimizes yet further the possibility of cold draughts.

In the Traube Restaurant in Berlin, the Anemostat air spreaders are placed in the low ceiling of the balcony directly over the tables, where they cause no inconvenience. Actually they are combined with the lighting to produce artistic fittings on novel lines. They

Combined light fittings and Anemostat ventilators, shown fitted in the ceiling of the Traube wine restaurant, Berlin.

can be used with any system of ventilation, and made in various shapes to suit the architectural design.

The same firm also makes a conditioning plant embodying several unusual features, the most interesting of which is the method of cleaning the air. This is performed by forcing it up through a bed of porcelain rings 20 ins. thick, 1½ ins. in diameter, and 1½ ins. long. These rings are kept continually wet by a pressure water spray, and a test made at the University of Frankfort of air so treated showed that over 98 per cent. of dust and bacteria were eliminated by this means. From this chamber the air passes over drying blocks and is finally delivered into the main duct at a humidity and temperature controlled according to the time of year. The space required for a conditioning apparatus varies with the size of the ventilating plant, but normally a fan room 18 ft. square should be sufficient for the supply of air to an audience of 1,500. LL. E. W.

Copper Back Boilers in Kitchen Grates

THE City of Birmingham Gas Department not long ago carried out some extensive tests relative to back boilers of copper in kitchen grates. For years past copper has been used as a material for back boilers, particularly where the nature of the local water was such that, with iron, comparatively rapid rusting was probable. A few plumbers and domestic engineers doubted the material, but its quality approved itself with use. But serious doubt arose as to whether, where copper was installed, coke could be safely used as fuel; and some engineers advised definitely no coke where a copper back boiler was in use. It was thought likely to lead to external corrosion and eventual perforation of the boiler.

The Copper and Brass Extended Uses Council co-operated in the tests, which were expressly undertaken to establish on a firm basis what service copper could give. Moreover, with the possibility of a partially carbonized coal for general use coming nearer, it was felt that knowledge of the reactions of such fuel should be extended.

The tests fell into two parts. First four boilers were fired with ordinary coke as sold for household use, under the conditions and for the hours of daily use general with kitchen boilers, for a period of 206 days. At the end of the time they were taken out and examined. One boiler was an ordinary commercial saddle-back boiler: make and history unknown: just purchased in an ordinary way as an example of a general trade product. It was of about $\frac{3}{16}$-in. plate. Two of the same size and shape were made of hot-rolled copper plate, ¼-in. substance (used to get a definite standard) and of specially refined copper to carry out ideas the C. and B.E.U. Council had formed upon that point. The fourth was a boiler of the same size and shape, of similar ¼-in. hot-rolled copper, but of ordinary refining.

The test appeared inconclusive. Not one of the boilers showed any sufficiently marked corrosion to justify calling it inferior. The two boilers made of specially refined copper showed a trifle less of corrosive action than the ordinary ¼-in. plate copper boiler. Some evidence also suggested, to a very slight extent, that the somewhat smoother finish of cold-rolled copper might make a better boiler than was the case with ordinary hot-rolled copper. It was accordingly decided to reshape and repeat the test.

The one trade boiler made of commercial copper and the two boilers of specially refined copper, of ¼-in. plate, were tested again. The ordinary refined ¼-in. plate boiler was discarded. Two new boilers, each of cold-rolled, specially refined, ¼-in. copper were added, and one also was added with its external surface specially treated by a trade process claimed to prevent corrosion, and known to possess some value with materials other than copper.

The three boilers first tried were now fired with a coke made especially and unduly high in sulphur so as to make the test far severer. One of the new cold-rolled specially refined copper boilers was fired with similar coke and also the surface-treated boiler. The other new boiler was fired with ordinary coal to give a comparison. All six were fired with such frequent running-off of hot water, and letting down of fires, as to give external condensation every chance of causing corrosion. Conditions far severer than those of the ordinary kitchen were thus set up. The test was continued for 195 whole days (approximately twelve hours each) and thirty-nine half-days.

The boilers were dismantled in October, 1930. Careful examination was made of the external condition of each, both before and after cleaning, external deposit was examined both visually and chemically, and all other necessary observations made. The conclusions to be drawn from the complete double test were:

a: No boiler was seriously corroded; the worst was very sound; nothing even suggested leaks. The entire suitability and serviceableness of copper for back boilers is confirmed.

b: The surface-treated boiler showed in patches a marked deterioration of surface. There was not enough evidence to show whether (or not) the copper itself was injured. But it is a fair conclusion that surface treatments are neither necessary nor desirable with copper.

c: The one boiler tested with coal showed more of a very slight surface corrosion than any of the boilers used with coke, although three of the latter had been in use 206 days longer, and although the coke used for the 195 days (plus half-days) of the second test had been made more severe, in its potential corrosive activity, than ordinary coke could be. The idea that coke might be a corrosive fuel with copper is entirely disproved.

d: The boilers made of cold-rolled copper showed no superiority in condition over those made of hot-rolled. While therefore reasonable smoothness in surface of the copper for boilers is desirable, a sufficient smoothness can be obtained by hot-rolling.

e: The two boilers made of a specially refined copper, although they had been through the double test, were sufficiently superior, in surface condition at the end of the test, to the others to justify the conclusion that this copper is preferable.

f: In case of any surface corrosion, the extra thickness of boilers made from ¼-in. plate provides a factor of safety. It is, however, not an essential, but can be recommended.

g: Some points in the manufacture of the boilers are clearly of importance. The brazing should be well done and finished smoothly; rough places in brazing may give a lead to corrosion. Internal protrusions of brazing should also be avoided. Indeed it should be of advantage to boiler-makers to study autogeneous welding with copper, to see if it is not a superior process. The design should avoid external projections due to overlapping of copper: there is evidence of a possible wastage due to corrosion wherever any such external projection is permitted. The bending of the "wrapper-plate" of the boiler should be accomplished with a minimum of strain, tension, roughening or thinning of metal at bends; there is evidence that smooth and even-thickness bends leave the copper at its full strength to resist corrosion potentialities.

It may be added that, in the discussion which has taken place among those who have examined the tests, mention has been made of the character of the setting as possibly delaying or aiding corrosion. It appears very desirable that there should not be crevices between setting and copper in which the products of combustion can settle. Also it is a suggestion that a layer of neutral fire-clay, between brickwork and copper, would be very well worth while; or a "stone-ash" wash, between setting and boiler, is another device worth trying.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Efflorescence and Staining on Masonry

AN architect wished to know the advantages in coating all Portland stone in contact with brick backing materials with a bituminous composition, also whether the bedding of Portland stone in Portland cement mortar and pointing with a hydraulic lime mortar would reduce the incidence of efflorescence and staining on the stone.

The absorption of salts from backing materials such as brick or concrete may be prevented by coating all masonry in contact with such backings with bitumen or other such preparation. The use of a cement or lime wash for this purpose does not provide a certain bar to the passage of water and, therefore, is comparatively unsafe; bituminous coatings do not, however, eliminate the staining and efflorescence due to alkali salts in the jointing materials.

The staining of masonry, particularly light coloured limestones, is usually caused by the formation of a brown water-soluble compound due to the action of alkali compounds in the jointing material on organic matter present in the stone. This water-soluble compound is brought to the surface as the stone dries and a brown stain results. When masonry is pointed with a dense cement mortar, little movement of water can occur through the pointing, and comparatively little drying takes place from the mortar joints. If the wall becomes wet, as it almost invariably does in building, the drying will take place through the stonework and any soluble salts present will tend to concentrate in or on the surface of the stone; with dense mortar the stone is therefore more liable to be subject to efflorescence and staining. By using a less dense mortar for pointing, such as a lime mortar, evaporation may be induced to take place from the joints, and the salts crystallize in the pointing; thus the likelihood of efflorescence and staining on the stone will be lessened.

In addition, Portland cement, eminently hydraulic lime, moderately hydraulic lime and white cement, contain alkali salts in decreasing amounts, and the use of a mortar made from materials having a lower content of soluble salts will again lessen the risk of efflorescence and staining of the masonry.

Cracking of Ceiling

Architects reported the cracking of suspended ceilings, consisting of cement rendering on expanded metal lathing, wired to steel angles and finished with acoustic plaster. It was suggested that the cracking was due to shrinkage of the acoustic plaster. Since it appeared improbable that a material such as acoustic plaster, having essentially a weak porous structure, would exert any marked effect on a dense cement rendering, the ceiling was inspected and some samples of the plastering materials were examined. The cracking was first noticed two or three weeks after the application of the acoustic plaster, which had been applied three or four weeks after completion of the rendering. Heating by means of embedded pipes near the centre of the ceiling had been commenced soon afterwards. The cracking was observed to be regularly distributed.

The shrinkage of a 1 : 2 cement-sand mortar, which had been used in this case, is of the order of 0·05 per cent., and it can be shown that in order to restrain this movement a stress greater than the tensile strength of the mortar is required. This means, of course, that unless the rendering is reinforced cracks are bound to occur; and, even when reinforced, planes of weakness will exist at any discontinuities in the reinforcing material and a tendency to the localization of shrinkage cracks will result. Tests indicate that, although the shrinkage movement of the acoustic plaster is slightly greater than that to be expected with a 1 : 2 cement-sand mortar, the average tensile strength of the plaster at seven days is only about 85 lbs. per sq. in. In comparison, the unreinforced rendering may be assumed to have a tensile strength of 600-800 lbs. per sq. in. at twenty-eight days. Actually, the thickness of acoustic plaster on the ceiling is one-half that of the rendering, and the maximum stress induced in the latter has been calculated to be less than 10 per cent. of the maximum tensile strength of the rendering. Taking these factors into account, it is considered extremely improbable that the shrinkage of the acoustic plaster has been responsible for the cracking.

The incidence of the cracks appears, undoubtedly, to be due to the existence of planes of weakness at the joints of the expanded metal which were very slightly lapped working joints when applying the rendering, and, as regards the ceiling as a whole, reduced sections in which vent openings occur.

To summarize, it is concluded that the cracking is primarily due to the shrinkage of the cement rendering, and its localization on planes of weakness in the rendering.

So far as remedial measures are concerned, it is recommended that any making good should be deferred for some time, in order to allow the greater part of the shrinkage to occur. With further work it is suggested that particular attention should be paid to the following points in order to avoid the formation of planes of weakness; (*a*) Provision of a good lap of at least 2 ins. of the expanded metal reinforcing sheets; (*b*) Use of as lean a mix as possible in the cement rendering in order to minimize shrinkage movements; (*c*) Delay the application of the finishing plaster until shrinkage of the rendering has had time to take place. (It might be possible, when panel heating pipes are embedded in the rendering, to heat up for a period before applying the finishing coat); (*d*) Avoid the coincidence of planes of weakness, e.g., the junction of reinforcing sheets corresponding with the section in which vent openings or similar features occur.

Prevention of Corrosion of Steelwork

An architect requested the advice of the Station in the following circumstances. He had been instructed to complete a building where operations had begun some three years previously but, through unforeseen circumstances, had been stopped. The steelwork of the building had been exposed during this period, and was now corroded. There was some doubt as to the advisability of retaining the steelwork, and, if retained, as to the best method of treating the surfaces to prevent further corrosion.

The question of the structural stability of the steelwork is a matter which does not fall within the scope of the work of this Station, and if any apprehensions are felt as to the weakening of the members by corrosion, it is suggested that the services of a consultant engineer be sought.

Should it be decided to retain the steelwork, it will be necessary to remove all rust either by sand-blasting or scraping and brushing, before any remedial measures are attempted. To protect the steelwork from further corrosion, painting with two coats of bituminous paint is probably as satisfactory a method as any; it is suggested, however, that additional protection may be obtained by applying a chromate primer before the bituminous paint.

Particular attention would have to be paid to the work around bolts and at angles, and where the steel enters the ground or concrete. In certain cases, it might be worth while pouring a bed of molten bitumen at the bases of columns.

COMPETITIONS OPEN

August 27.—Sending-in day. Proposed all-Scottish House for the Ideal Home Exhibition. Limited to architects practising in Scotland or of Scottish birth. Assessor: John Watson, A.R.S.A., F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from *The Daily Mail*.

September 5.—Proposed extension of the Town Hall, Hackney, for the Hackney Borough Council. Architects are invited to submit their names and brief particulars of their experiences. The competition will be limited to six architects to be selected from the applicants. Assessor: Professor S. D. Adshead, F.R.I.B.A. Premiums: £250, £150 and £100. The authors of the three unpremiated designs will receive a payment of £50 each. Applications should be submitted to R. H. R. Tee, LL.D., Town Clerk, Town Hall, Hackney, E.8, by September 5 next.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich.

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

SOCIETIES AND INSTITUTIONS

NEXT R.I.B.A. CONFERENCE

A special meeting of the Council of the Manchester Society of Architects has been held to consider the preliminary arrangements for the R.I.B.A. Conference of 1932, which is to be held in Manchester next June.

Following a visit of Mr. Ian MacAlister, secretary of the R.I.B.A., to Manchester, when he outlined the general scope of the Conference and described the arrangements made in previous years, the Council met and allotted various sections of the necessary work to numerous members. Mr. Francis Jones, F.R.I.B.A., has accepted the duties of general secretary to the Conference.

Numerous tentative proposals were put forward, which are more than sufficient to indicate that an interesting programme, including both the historical past of the Society's area and the characteristic present of this important industrial district, will be available to the visitors to the Conference.

The Manchester Society is looking forward to entertaining a large number of architects from all quarters of the kingdom.

VISIT

The second of the series of the Manchester Society of Architects' summer evening visits was made on Wednesday, August 5, when the members visited Sunlight House, Quay Street, Manchester.

This building is a large block of offices, with shops below, designed by Mr. Joseph Sunlight, of Manchester. It is one of the highest blocks of offices in the city, and has a simple but dignified façade of Portland stone.

The visitors were shown round the building by Mr. Sunlight, and the Society was indebted to him for a most interesting evening.

ANNOUNCEMENTS

Mr. Thomas Edward Jones, A.R.I.B.A., of Arvonia Buildings, High Street, Bangor, has removed his office to Midland Bank Chambers, Bangor.

Mr. Thomas F. Ford, A.R.I.B.A., has removed his office from 35 Finsbury Square, E.C.2, to 12 City Road, E.C.1.

THE ARCHITECTS' DIARY

WEDNESDAY, AUGUST 19

ROYAL SOCIETY OF ARTS INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of some of the designs submitted in the above competition, including architectural decoration, textiles, furniture, book production and advertising. Until August 31. 10 a.m. to 5 p.m. (Sundays, 2.30 to 6 p.m.) **10 a.m.**

SIR JOHN SOANE'S MUSEUM, 23 Lincoln's Inn Fields, W.C.2. Exhibition of Professor C. R. Cockerell's water-colour drawing, "A Tribute to Sir Christopher Wren." Until August 28.

SATURDAY, AUGUST 22

Sunrise, 5.54 a.m. Sunset, 8.11 p.m.

MONDAY, AUGUST 24

LONDON SOCIETY. Visit to the Chelsea Physic Garden (Swan Walk entrance, between Royal Hospital Road and the Embankment, S.W.3). **3 p.m.**

SATURDAY, AUGUST 29

Sunrise, 6.5 a.m. Sunset, 7.55 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1

INTERNATIONAL ILLUMINATION CONGRESS. London, Glasgow, Edinburgh, Sheffield, Buxton, Birmingham and Cambridge. Until September 19.

FRIDAY, SEPTEMBER 4

INTERNATIONAL ILLUMINATION CONGRESS. At Glasgow. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Organization for the Development of Electric Lighting," by C. A. Atherton; "Progress and Teaching of Illumination in Italy," by C. Clerici; "Lighting Progress in South America," by A. M. Baidaff. Section 3: "The Provision of Adequate Daylight in Building Regulations," by P. J. Waldram; "Daylight Illumination and Town Planning," by C. G. Möller; "Visual Performance at Various Levels of Daylight Illumination," by K. Y. Yang; "Daylight Illumination of Art Galleries with Overhead Lighting," by T. Hirayama. Afternoon Session, 2.30 p.m. Section 1: "Home Lighting," by C. Haslett and N. E. Miller. Section 3: "Photo-Electric Measurements of Daylight Illumination by the Use of a Model Room," by Z. Yamauti and K. Hisano; "Mathematical and Graphical Determination of Direct Daylight Factors," by A. C. Stevenson; "Prediction of Natural Illumination in Interiors and on Walls of Buildings," by H. H. Higbie and A. D. Moore. **10 a.m.**

SATURDAY, SEPTEMBER 5

Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7

SANITARY INSPECTORS' ASSOCIATION, 27 Moreton Street, S.W.1. Annual Conference to be held at Bridlington. Until September 12.

INTERNATIONAL ILLUMINATION CONGRESS. At Edinburgh. Following are some of the papers to be read. Morning Session, 9.30 a.m. Section 1: "The Lighting of Seaside Resorts," by A. P. Allan and J. M. Campbell; "Mason Experiments in Street Lighting," by W. S. Stiles; "Modern Public Lighting by Electricity," by W. J. Jeffery. Afternoon Session, 2 p.m. Section 1: "The British Standard Specification for Street Lighting," by C. C. Paterson. **10 a.m.**

THURSDAY, SEPTEMBER 10

INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2: "Architectural Lighting," by L. Kalff; "Engineering Aspects of Architectural Lighting," by W. J. Jones. **10 a.m.**

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 16.

FRIDAY, SEPTEMBER 11

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. **10 a.m.**

ARCHITECTURAL ASSOCIATION. Annual Excursion: to Austria. The programme will include six days in Vienna, followed by a six days' motor coach tour through Austria, returning to London on September 26.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

WEDNESDAY, SEPTEMBER 16

INSTITUTION OF STRUCTURAL ENGINEERS. Visit to the Shipping, Engineering and Machinery Exhibition at Olympia.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Manchester and District Branch. Visit to the Wardle (Watergrove) Reservoir.

THURSDAY, SEPTEMBER 17

Closing date of THE ARCHITECTS' JOURNAL September Holiday Sketches Competition.

LAW REPORT

BUILDER'S APPEAL : COUNTY COURT JUDGMENT SET ASIDE

Riley v. *Colquhoun. King's Bench Divisional Court. Before Justices Swift and Charles*

IN this case Mr. Samuel Colquhoun, a builder, of Warren Road, Blundellsands, appealed against a judgment of Judge Morris sitting at the Liverpool County Court, awarding the plaintiff in the action, Mr. William Riley, of Burdett Road, Waterloo, Liverpool, £25 damages in regard to the roof of a house he had purchased from the appellant.

It appeared that Mr. Riley purchased his house from the appellant for £600 in 1927 and was in occupation in the October. Mr. Riley had not been long in the house when he made a complaint as to the roof leaking and the appellant executed certain repairs. When gales came Mr. Riley again complained of the roof, and a local property owners' association took the matter up and the appellant replaced 120 slates on the roof "as an act of grace." Mr. Riley's case was that this did not cure his complaint, and that as the roof was still leaky he instituted county court proceedings for damages, with the result that Judge Morris, whilst holding that the house was fit for occupation, said the slates used were of poor quality, and he awarded Mr. Riley £25 damages.

Mr. Lynskey, K.C., for the appellant, said his client appealed from this judgment. Counsel's contention was that the roof was on the house when Mr. Riley agreed to purchase. It was true that there was a clause that the vendor would complete the house in a good and workmanlike manner, fit for occupation, but counsel submitted that this applied only to work to be done and not to work already done. Here Judge Morris had found that the house was fit for occupation and in counsel's opinion that clearly exempted his client from any further liability. Under these circumstances he argued that the appeal should be allowed.

Sir Thomas Hughes, K.C., for the respondent, supported the judgment of Judge Morris, and said, in his opinion, the appellant was liable for the roof and that his client was entitled to the damages awarded.

The Court allowed the appeal, set aside the judgment of the county court judge and entered judgment for the appellant, with costs.

Mr. Justice Swift, in the course of his judgment, said he was not going to determine the point in the contract as to whether a certain clause applied to work done or to be done, as that point had been left open by the Court of Appeal in the case of *Lawrence* v. *Castle*, and, so far as his lordship was concerned, it was still open.

In the present appeal the county court judge had found as a fact that this house was fit for human habitation, and if that was the case, then it was clear that the appellant had done all he had contracted to do, either expressly or completely. Having provided a house fit for human occupation, the appellant could not be held liable for defects which developed subsequently. Therefore the county court judge came to a wrong conclusion and the appeal must be allowed.

Mr. Justice Charles agreed.

TRADE NOTES

Messrs. Haywards, Ltd., of Union Street, Borough, London, S.E.1, have issued two catalogues describing and illustrating their iron staircases and "copperlite" glazing. In *Iron Staircases* it is strongly urged that every building of any considerable height should be served with an external iron staircase, permanently fixed in such a way that it is always ready for use and equally available from all floors. Such a staircase, it is claimed, cannot be overloaded by a panic rush, and, if properly constructed, at no stage is its stability in danger in the early phases of a fire. A weighty argument in favour of these external staircases is the fact that Great Britain suffers a fire loss of £12,000,000 per annum (a figure that is steadily rising), so that the danger of a fire is a menace to every building, private, public and industrial. Some of the buildings which are provided with these staircases include the National Radiator Building, London (Gordon Jeeves, F.R.I.B.A., and R. M. Hood, architects); Kodak Building, Kingsway, London (W. E. Riley and E. B. Glanfield, F.R.I.B.A., architects); St. Mary's Hospital, Paddington, London (Sir William Emerson, F.R.I.B.A., architect); Royal Westminster Hospital, London (Adams, Holden and Pearson, FF.R.I.B.A., architects), Yorkhill Hospital, Glasgow (John Burnet, Son and Dick, architects); and New Park Hospital, Davyhulme, Manchester (Elcock and Sutcliffe, FF.R.I.B.A., architects). In the second catalogue, entitled *Copperlite Glazing*, partly illustrated in colour, it is explained that "copperlite" glazing is built up of small panes of glass mounted in copper bars having a definite initially-formed rebate, that is to say, the bars are of I section, and hold the glass in a positive grip, independently of the copper deposition, which further secures and seals the glass. Bars of I section are employed as being stronger and more satisfactory than bars without rebates, which depend wholly upon the work done in the copper depositing bath for their security. Hayward's special method of construction, it is claimed, provides a large contact area and definite hold between the glass and the framework, and further stiffening by the deposition of copper, which serves the double purpose of giving maximum strength and of sealing the minute crevices between the glass panes and the rebated copper bars, ensuring a product of the highest strength and quality. It is also stated that the result of the tests carried out by the British Fire Prevention Committee on Hayward's "copperlite" glazing, after being subjected to 1,750 deg. (red heat) for 1½ hours, followed by the application of water at a pressure of 50 lbs. per sq. in. from a fire engine, was that it was found to be intact.

*

Messrs. W. H. Gaze and Sons, Ltd., have recently secured the following contracts: Extension to St. Joseph's Church, Malden, for A. Gilbert Scott, F.R.I.B.A.; extension to Victoria Hospital, Chelsea, for R. Kitching Ellison, A.R.I.B.A.; new Library and Fire Station, Surbiton, for Joseph Hill, F.R.I.B.A.

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In the Blue Coat School, Birmingham, designed by J. L. Ball and H. W. Simister, and illustrated in the ARCHITECTS' JOURNAL for July 29 last, about 5,250 yards super of "Expamet" expanded steel, supplied by the Expanded Metal Co., Ltd., of Caxton Street, Westminster, S.W.1, were used to reinforce the concrete flooring.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

St. Paul's Church, Hayward's Heath, Sussex (pages 237–240). General contractors, James Longley & Co., Ltd. Sub-contractors : British Reinforced Concrete Eng. Co., reinforced concrete; W. T. Lamb and Sons, bricks; Thomas Blackburn and Sons, Ltd., structural steel; Ames and Finnis, special roofings; Ruberoid Co., Ltd., roofing felt; Barrowclough and Sanders, glass; James Longley & Co., Ltd., wood-block flooring; Seward & Co., Ltd., central heating; W. H. Hogger, electric wiring; General Electric Co., Ltd., electric light fixtures; Musgraves (Liverpool), Ltd., sanitary fittings; James Gibbons, Ltd., casements and door and window furniture; Marchetti, Ltd., decorative plaster and marble.

Broxholme House, Fulham, S.W. (pages 241–243). General contractors, Hole & Co., Ltd. Sub-contractors : Henry Greenham, Ltd., and W. T. Lamb and Sons, facing bricks; Dorman, Long & Co., Ltd., structural steel; A. C. W. Hobman & Co., Ltd., artificial stone; McDowell Steven, stoves and ranges; General Asphalte Co., Ltd., asphalt; Roberts Adlard & Co., roof tiling; Nettlefold and Sons, Ltd., and Lockerbie and Wilkinson, Ltd., ironmongery; Fletcher Russell & Co., Ltd., gas coppers; W. H. Gascoigne & Co., plumbing and hot water; Hawkins, Carlton & Co., plastering; Archibald Kenwick & Co., baths; A. H. Herbert & Co., Ltd., wall and floor tiles; Nash and Hull, Ltd., bronze lettering and numerals.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. A. Frampton is to erect eleven shops and flats and a billiards hall in Bromley Way, on the DOWNHAM estate.

SOUTHERN COUNTIES

Plans passed by EASTBOURNE Corporation: Two houses, Dillingburgh Road, for Mr. A. J. Fellows; shop, Victoria Drive, for Mr. W. R. Hamblyn; two houses, Kingston Road, for Messrs. P. D. Stonham and Son; three houses, Osborne Road, for Mr. A. Ford; three houses, Moy Avenue, for Mr. F. C. Benz; ten houses, Kingston Road, for Messrs. P. and G. Attfield.

Plans passed by the GRAVESEND Corporation: Four houses, Central Avenue, for Mr. T. Bennett; eight houses, Hillside Avenue, for Mr. C. A. Reid; bungalow, Malvina Avenue, for Mr. C. D. French.

Messrs. Browning and Hayes are to develop the West Street estate at Cowley, OXFORD.

The OXFORD Corporation is to build fifty houses on Corporation estates for rehousing displaced tenants.

The Kent Education Committee is to erect a central school in Hayes Lane, WEST WICKHAM.

Plans passed by the WEYMOUTH Corporation: Four houses, Cleveland Avenue, for Mr. W. Knell; school room, Convent of the Sacred Heart for Messrs. Jesty and Baker; three houses, Northovers Estate, for Mr. F. Greenaway; estate layout for Mr. F. Weeden at Radipole, for Messrs. Theo Conway.

The WEYMOUTH Corporation has approved plans for the erection of showrooms for the electricity dept. at the corner of Westham Road and Royal Terrace.

SOUTH-WESTERN COUNTIES

The BRISTOL Education Committee has selected a site on the Bedminster estate for the erection of an elementary school.

The BRISTOL Corporation has prepared a clearance scheme for the St. Paul area.

The BRISTOL Education Committee has obtained a site in Melvin Square, Knowle, for the erection of an elementary school.

The Hampshire Education Committee is to extend the CHILWORTH and BADDESLEY elementary school, at a cost of £7,000.

The DORCHESTER Corporation is to prepare a scheme for the erection of further houses on the Victoria Park site.

The DORSET C.C. is preparing a scheme for the provision of isolation hospital accommodation for the county.

Plans passed at PAIGNTON: Three shops, Old Torquay Road, for Mr. A. Savile; four houses, Hilton Crescent, for Mr. H. Proctor; dining hall, café, assembly room and pavilion, Holiday Camp, King's Ash Hill, for Mr. Leins; nineteen houses, Clifton Road, for Mr. A. E. Jonas; bungalow, Old Dartmouth Road, for Mr. Burman; house, Marldon Road, for Messrs. Scriven and West; ten houses, Clifton Gardens, for Messrs. R. H. Peeke and Son; house, Dartmouth Road, for Mr. F. C. Stockman; bungalow, Maidenway Road, for Mr. G. Wyatt.

Plans passed at PLYMOUTH: Shop, Mutley Plain, for Mr. B. Hawken; additions, Holy Cross School, Beaumont Road, for the Rev. Father Lee; four houses, North Down Road, for Mr. W. Andrews; eleven houses, Ganges Road, for Messrs. Waycott Bros.; two houses, Weston Park Road, for Mr. A. Manning; eighteen houses, Swilly House Estate, for Mr. C. G. Edgcumbe; six bungalows, Hill Top Crest, for Messrs. A. E. Searle and Son; shop premises, 100, 101 and 102, Fore Street, for Messrs. Marks and Spencer; twenty-four houses, South Down Road, for Messrs. Selborne and Labell; layout of streets, Crest Hill Estate, for Mr. F. Westcott; two houses, Compton Lodge Estate, for Mr. M. Olver; three shops, Egg Buckland Road, for Mr. J. W. Spencer.

The Hampshire Education Committee is to enlarge the SOUTH HAYLING elementary school, at a cost of £10,000.

The Hampshire Education Committee has voted £10,500 for the erection of a junior school at TITCHFIELD.

The TORQUAY Corporation has approved amended plans by Messrs. Bridgman and Bridgman for adapting the Y.W.C.A. premises for municipal and library purposes, at a cost of £29,895.

Plans passed by the TORQUAY Corporation: Four houses, Barton Hill Road, for Mr. F. White; two houses, Newton Road, for Mr. H. Pearce; two bungalows, Isaacs Hill, for Mrs. Ellicott; two houses, Barnfield Road, for Mr. L. Gough; additions, Prince of Wales Inn, Union Street, for Plymouth Breweries, Ltd.; twelve houses, Florida Way, for Torquay Building Co.; additions, 3–6 Hilly Gardens, for Mr. W. Steer.

EASTERN COUNTIES

The COLCHESTER Corporation has approved plans by Messrs. Baker and Burton, architects, for the provision of a clinic at the education offices.

The COLCHESTER Corporation is to erect sixty-four houses, by direct labour, at Old Heath, at a cost of £20,500.

Plans passed by the COLCHESTER Corporation: Church hall, Collingwood Road, for Messrs. John Harrison & Co.; two houses, St. John's Road, for Mr. E. Mower; two houses, Shrub End Road, for Mr. G. Hearsum; screen erecting shop, Hythe Bridge Ironworks, for Messrs. F. W. Blackett & Co., Ltd.; shop, Mill Street, for Mr. A. E. Wagstaff.

MIDLAND COUNTIES

The Warwickshire Education Committee is to proceed with the extension of the central school at ARLEY.

The Notts C.C. is to erect a welfare centre in Bull Pit Lane, BALDERTON.

The Worcestershire county architect is preparing plans for the erection of a junior school for 350 pupils at CAKEMORE.

The CHESTERFIELD Brewery Co. is to erect an hotel at the junction of Pickles Lane and Carter Lane, Warsop, Notts.

The COVENTRY Corporation is seeking sanction for a loan of £49,000 for the erection of branch baths at Foleshill.

The COVENTRY Corporation is to erect 200 houses at Stoke Aldermoor, at a cost o £61,000.

The Worcestershire Education Committee has prepared plans for the erection of a senior school for 800 pupils at HALESOWEN.

The Warwickshire Education Committee has approved plans for the erection of a junior school for 270 pupils in Malthouse Lane, KENILWORTH.

The KIDDERMINSTER Corporation is to erect baths in Castle Road.

The Worcestershire Education Committee is to erect a junior school at LEIGH HURST.

The MATLOCK U.D.C. is to erect thirty-six houses on the Starkholmes Road estate, from plans prepared by Mr. John Simpson.

The MERIDEN R.D.C. is to erect a fire station in Sumner Road, Coleshill.

The governors of the Women's Hospital, Peel Street, NOTTINGHAM, are to prepare a scheme for extensions.

The NUNEATON Corporation is to erect municipal buildings at the corner of Coton Road and Mill Walk from plans prepared by Messrs. Peacock and Bewlay.

The Notts Education Committee is to erect an elementary school for 500 pupils at OLLERTON.

The Warwickshire Education Committee is to erect a senior school for 480 pupils at Sharmans Cross, SOLIHULL, at a cost of £20,000.

The Warwickshire C.C. has passed plans for the erection of a petty sessional court at SOLIHULL.

The STRATFORD-ON-AVON R.D.C. has purchased two acres of land adjoining the housing estate, for the erection of further houses.

The STOKE-ON-TRENT Education Committee has acquired a site on the Abbey Hulton estate, for the erection of an elementary school.

The Worcestershire Education Committee has prepared plans for the erection of a senior school for 400 pupils at STOURPORT.

The Worcestershire Education Committee is to obtain a site at UPTON-ON-SEVERN for the erection of a senior school for 320 pupils.

The Warwickshire C.C. is to erect a nurses' home at the mental hospital, WARWICK, at a cost of £43,000.

The Notts Education Committee has purchased a site in Loughborough Road, WEST BRIDGFORD, for the erection of a secondary school.

NORTHERN COUNTIES

The Lancashire Education Committee has obtained a site at BLACKROD, for the erection of a senior school.

The BOLTON Corporation has approved the lay out of land at Lonsdale Road, for the erection of 112 houses.

Plans passed at BOLTON: House, Borrocks Fold, for Mr. T. P. Longworth; eight houses, Southgrove Avenue, for Messrs. A. H. Price and Grove; house, Boot Lane, for Mr. J. H. Sharples; house, Brook Hey Avenue, for Mr. W. Turner; extension to office, Orlando Street, for Messrs. Bellamy and Dagnall; extension to premises, Back Haydock Street, for Mr. J. Pennington; extensions, 327 Bury Road, for James Haslam Estate Company.

The DURHAM County Education Committee has purchased a site at St. Nicholas for the erection of an elementary school for the Easington colliery district.

The Lancashire Education Committee has obtained sanction for a loan of £4,000, for the erection and equipment of a gymnasium at FARNWORTH Grammar School.

The Rev. Francis Avery is to erect a Roman Catholic school for 200 pupils in Dryden Road, Low Fell, GATESHEAD.

The Frankby Hall Estate Co. is developing a building estate at GREASBY, Cheshire.

The HULL Education Committee recommends a site on the Queen's Dock estate for the erection of the new technical college.

The Rev. T. McGrath is to erect a Roman Catholic school for 400 pupils at Deane, HULL.

The HULL Education Committee is to obtain a site on the Johnson Fold estate, for the erection of an elementary school.

The LANCHESTER R.D.C. is to erect sixteen bungalows at Knitsley and six houses at Winning.

The LIVERPOOL Corporation is to erect a further 500 houses on the Dovecot estate.

Mr. C. J. Boyle is to erect a cinema in Green Lane, LIVERPOOL.

The Lancashire C.C. has obtained sanction to borrow £5,116 for the erection of a county police station at ORRELL.

The Cheshire C.C. has approved a scheme for the erection of a block for 100 patients at the PARKSIDE mental hospital, at a cost of £16,000.

The Rotherham Co-operative Society, Ltd., is to develop a building estate in Wickersley Road, ROTHERHAM.

The SHEFFIELD Corporation has obtained sanction to borrow £22,318 for the erection of fifty-eight houses on the Shiregreen estate, and £156,092 for the erection of 448 houses on the Wybourn estate.

The WARRINGTON Education Committee is seeking sanction to borrow £47,887 for the erection of the Fairclough council school.

Plans passed by the WARRINGTON Corporation: Sixteen houses, Winwick Road, and two houses, Manchester Road, for Mr. R. Smith; extensions, Sankey Street, for the Warrington Co-op. Society, Limited; six houses, Oakland Street, for Mr. G. Cooper; eight shops, Thelwall Lane, for Messrs. J. P. Booth and Son.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENS-FERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKE-FIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R. at Nine Elms:	
Portland stone, Whitbed . . . F.C.	4 6
,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	22 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, ... ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	1 3
,, French . . . ,, ,,	1 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 2" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"	½"	¾"	¾"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:	Per cent.		Per cent.
TUBES.			
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . .	55	,, steam .	40
FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ½" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 9
,, ,, ¾" . . . ,,	9 6
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	3" s. d. F.R. 7	4" s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" s. d.	4" s. d.	6" s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,,15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add	3 0
If in underpinning	"	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
2" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
½" do.	"	3 4 0
¾" do.	"	3 13 0
1" deal moulded skirting; fixed on, and including grounds plugged to wall	F.S.	1 10
1½" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 0
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " " "	"	3 0
1½" " moulded both sides	"	3 0
2" " " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	"	2 0 6
Do. in covering to turrets, etc.	"	2 7 6
Do. in soakers	"	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 6
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 0
9" × 3" " " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

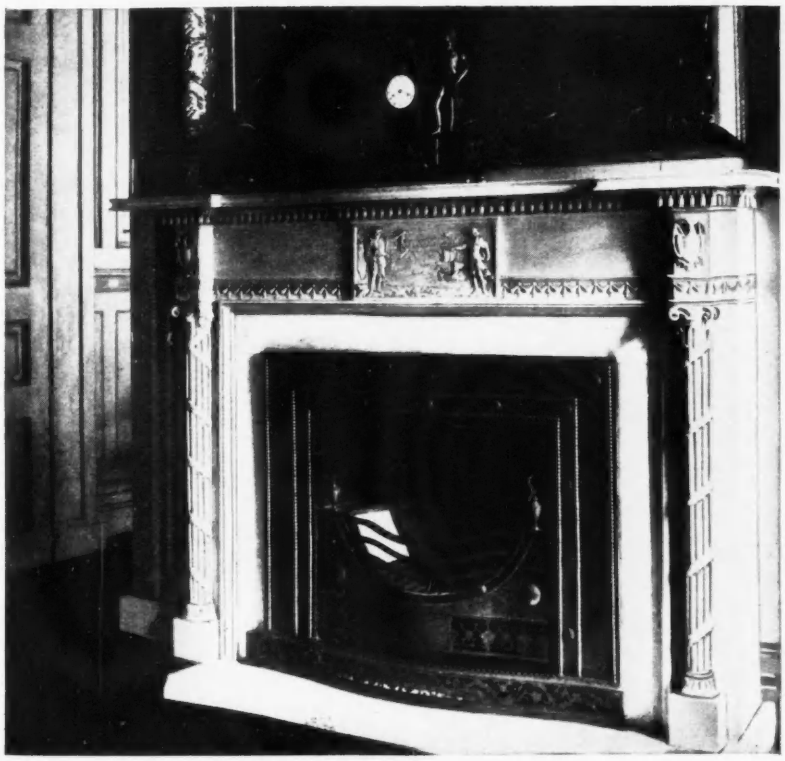
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcole and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from "	3 0

FROM THE NEW WORLD: I

MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS



MANTEL IN THE GOVERNOR'S SUITE, OLD CITY HALL, NEW YORK

AMERICAN architecture of the Colonial epoch shows the influence of contemporary European styles—British in the Virginias and New England, Dutch in New York and its southerly vicinity, French in New Orleans. But, as the set of supplements of which this is the first will reveal, the expression of these tendencies was conditioned by climate, by the resources and materials available to the pioneers, and by their taste.

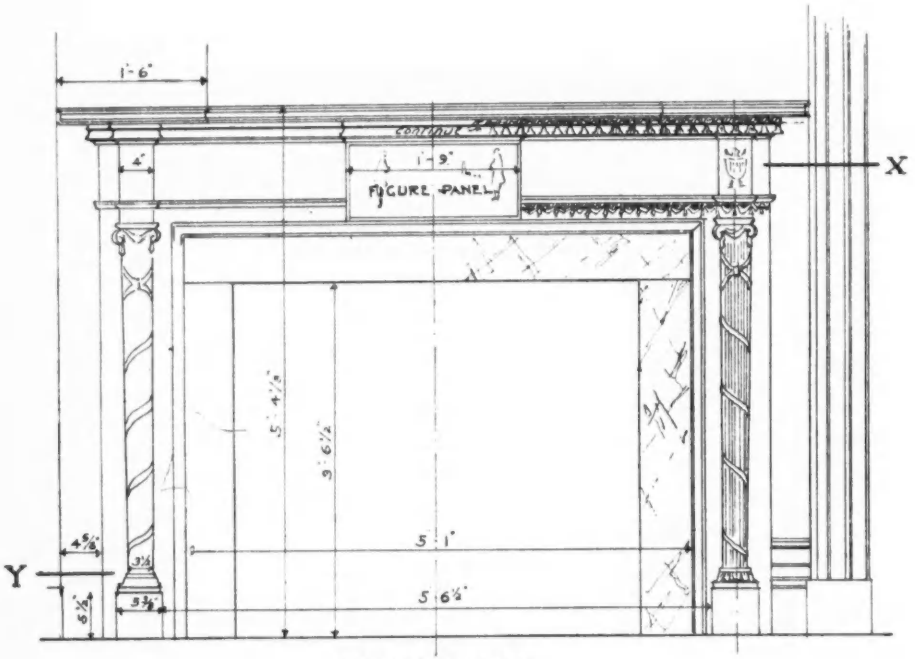
The measured drawings within are devoted to a mantel and certain dados. The above photograph of the former also gives, on the left, a glimpse of some of the wainscoting included in one of the drawings.

The merit of the mantel lies equally between its pleasing and well-proportioned design and its craftsmanship.

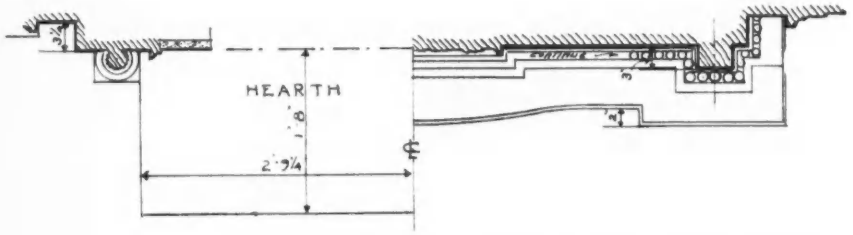
Though the purist may cavil at the suggestion of silken tassels in the bed-mould and of woven fabric on the architrave and capitals of the shafts, these playful incidentals may be forgiven, inasmuch as they have been kept strictly subordinate to the design as a whole.

In the dados in the Old City Hall the same refinement of mouldings is noticeable as in the fireplaces in these rooms; but while the latter features command direct attention, the dados take their place naturally and unobtrusively as part of the wall design and not as features of interest in themselves.

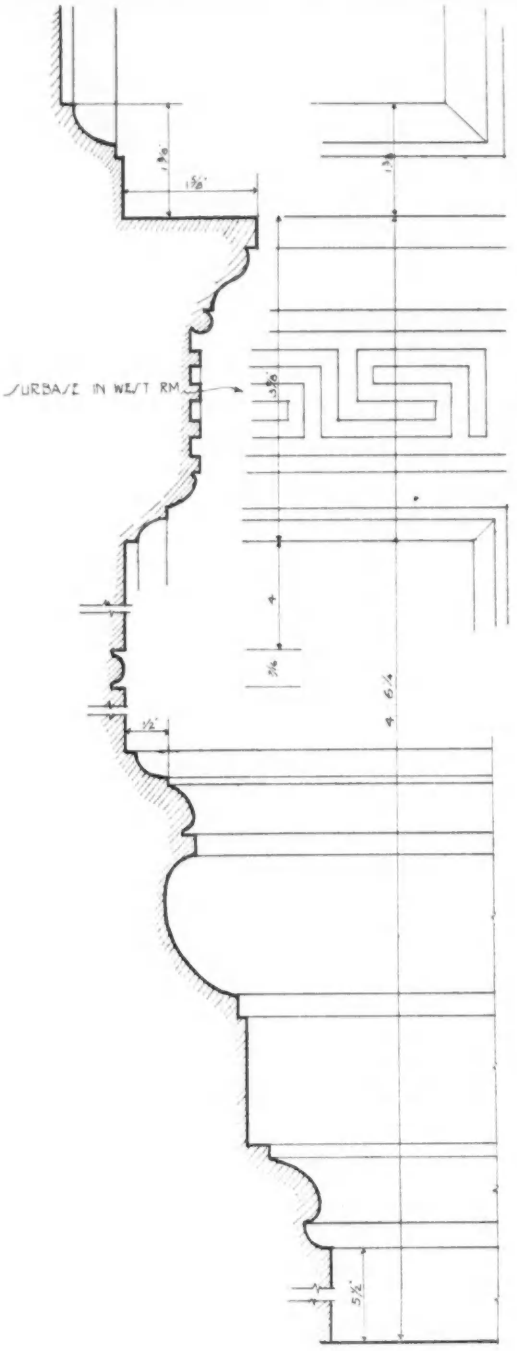
MANTEL IN GOVERNOR'S SUITE. OLD CITY HALL. NEW YORK CITY.

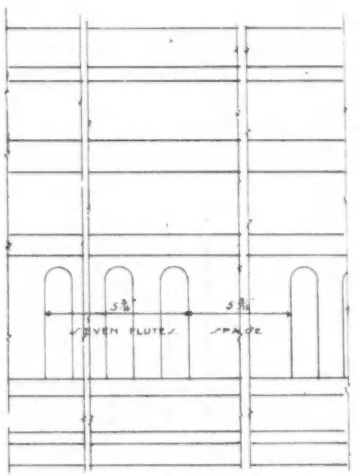


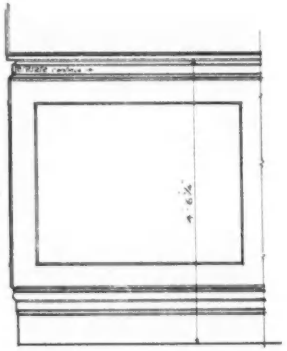
ELEVATION.



HALF PLAN AT 'Y' HALF PLAN AT 'X' (REFLECTED)

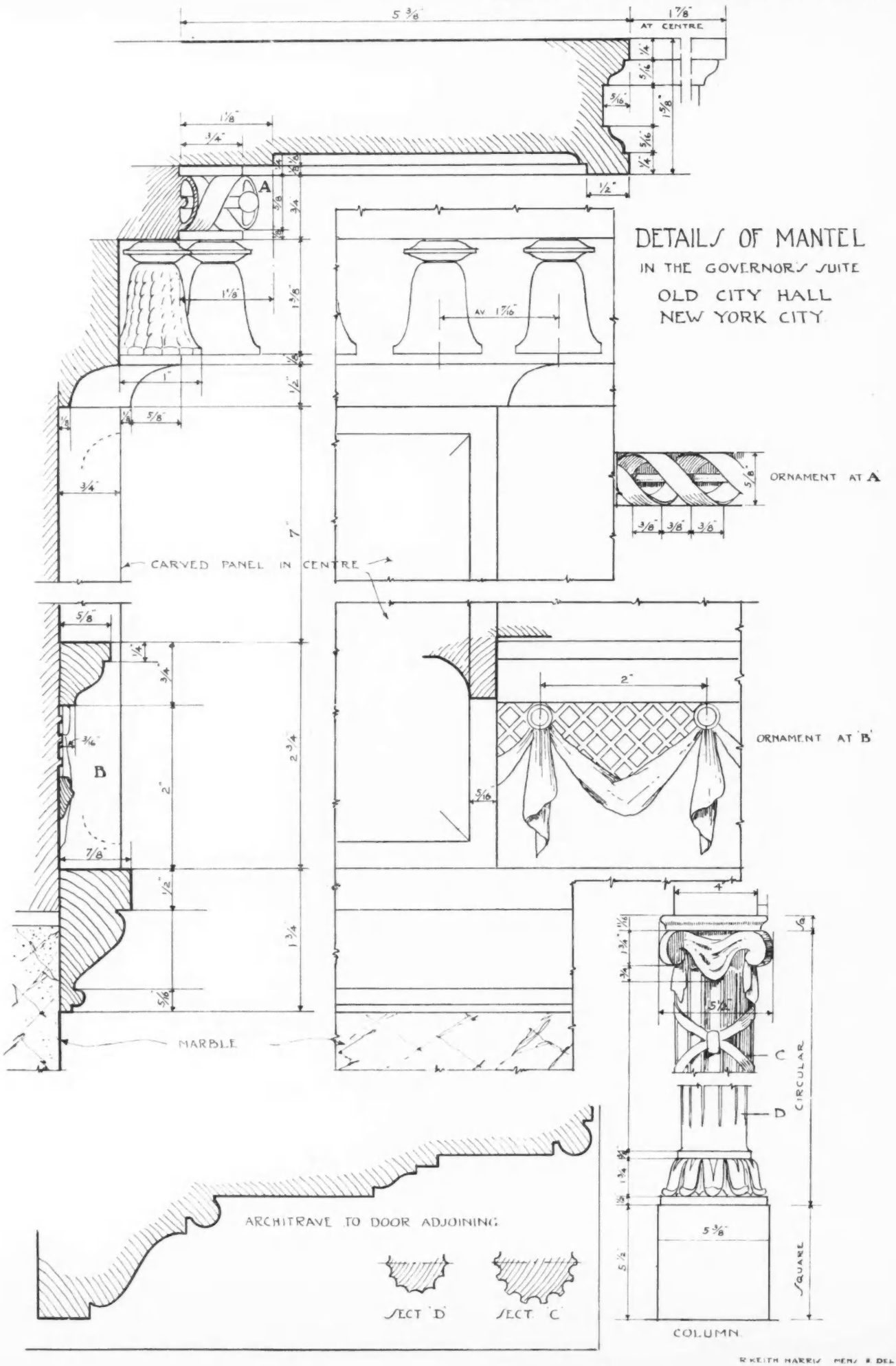






WAINSCOT IN GOVERNOR'S SUITE OLD CITY HALL NEW YORK CITY

R. KEITH HARRIS, DELIN. & DEL.



HALF PLAN AT 'Y' HALF PLAN AT 'X' (REFLECTED)

CECIL SHARP HOUSE, N.W.

A DETAIL FROM THE ENGLISH FOLK DANCE HEADQUARTERS

[*H. M. Fletcher and Godfrey Pinkerton, Architects.*

ONE OF THE GARDEN DOORWAYS AND PROCESSIONAL STAIRWAYS

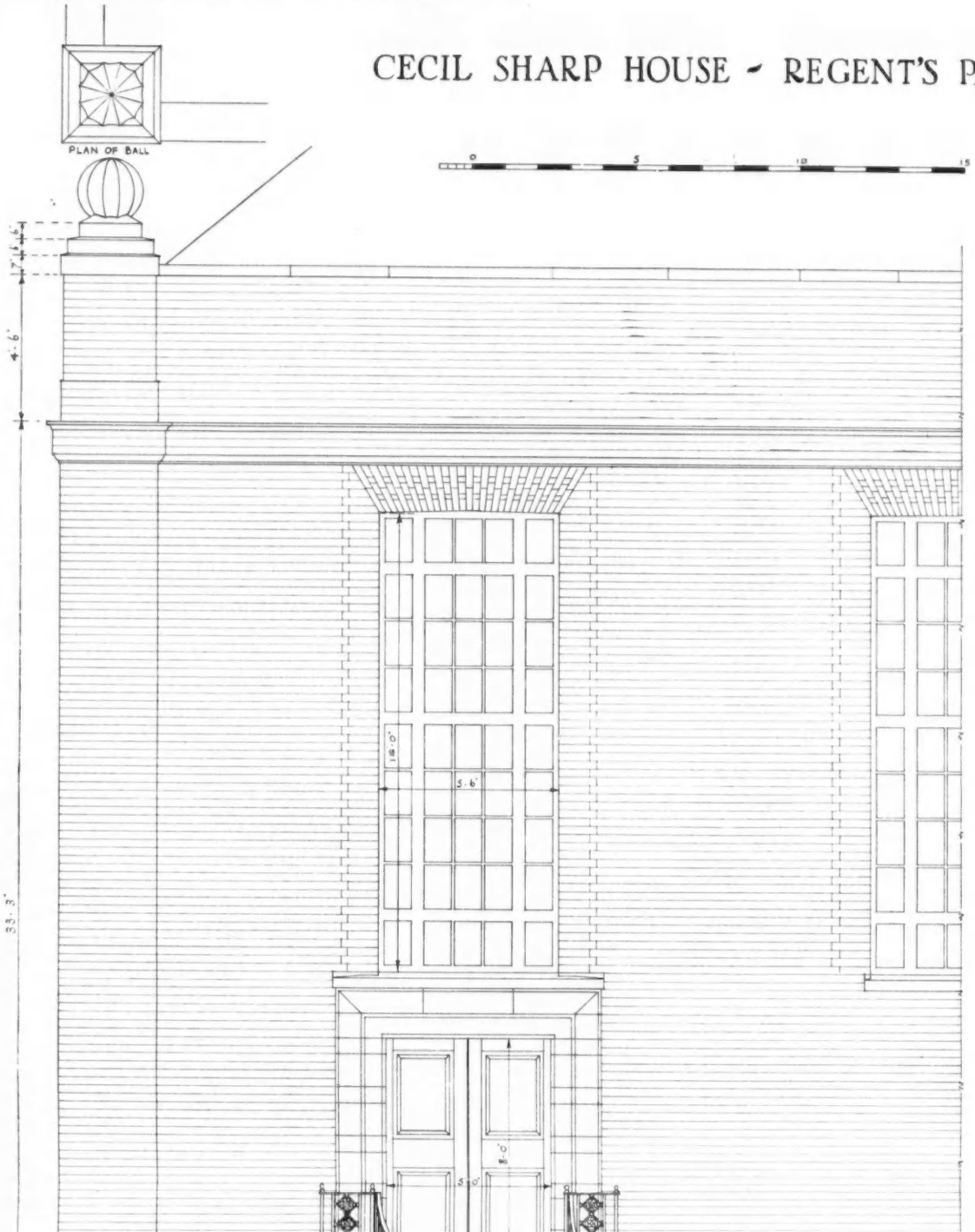
THE two doorways, one of which is illustrated, above photographically, and by scale working drawings within, lead from the large hall in the London Headquarters of the English Folk Dance Society to the garden, which was originally planned as a theatre for open-air festivals and entertainments.

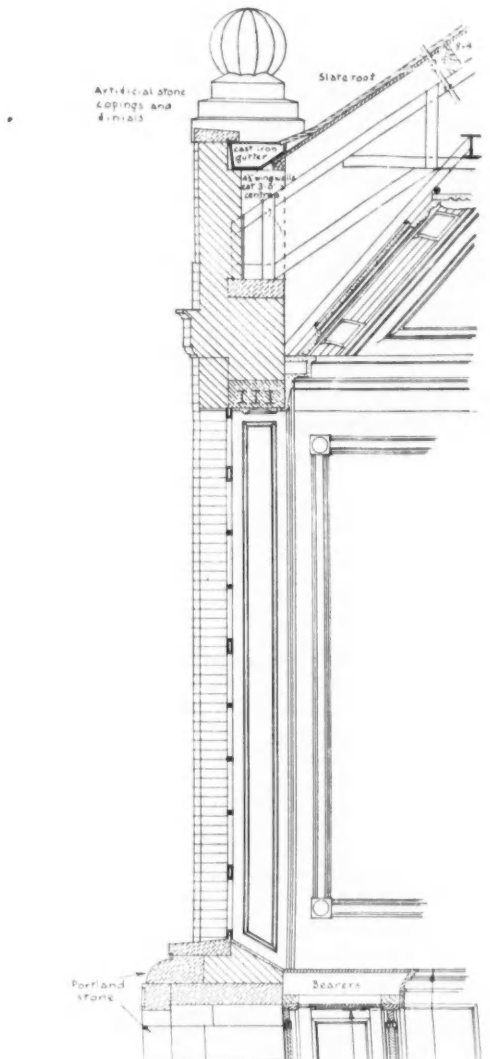
It was intended that performers should enter the garden processionally, down the steps from these doors and up the steps from the large central classroom in the basement, the two sets of dancers meeting on the circular landings before proceeding together to the arena.

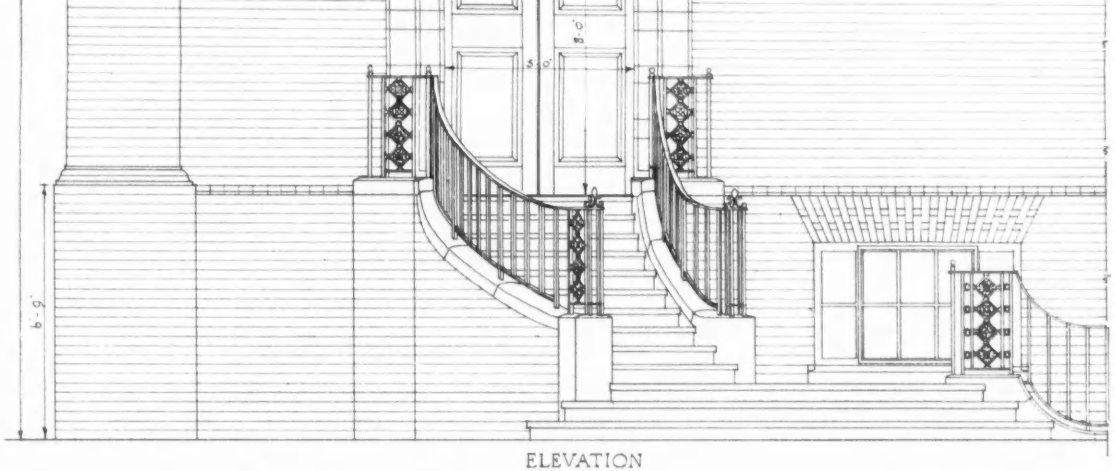
The bricks are roughened wire-cuts of a varied pinkish-brown colour. The pointing is slightly toned and flush with the brickwork. The bond is English up to the set-off at the top of the plinth: above that it is Dutch. The bricks are so hard that for the sake of economy the arch-bricks are specially made, not cut. The flat arches are laid with a camber of $\frac{3}{4}$ in. to 5 ft. 6 ins., and proportionately less for smaller spans. The railings are wrought iron, with ornamental panels of cast iron.

Cecil Sharp House was illustrated and described in the issue of June 4, 1930.

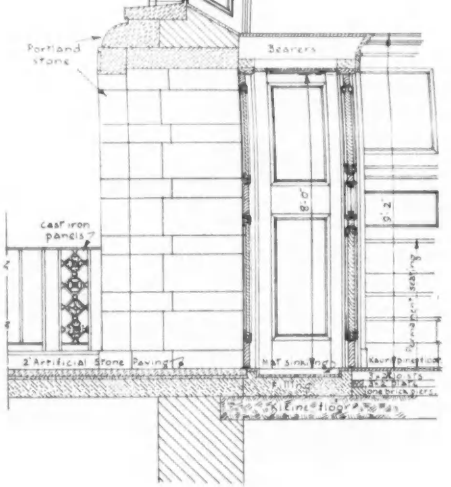
CECIL SHARP HOUSE - REGENT'S PARK



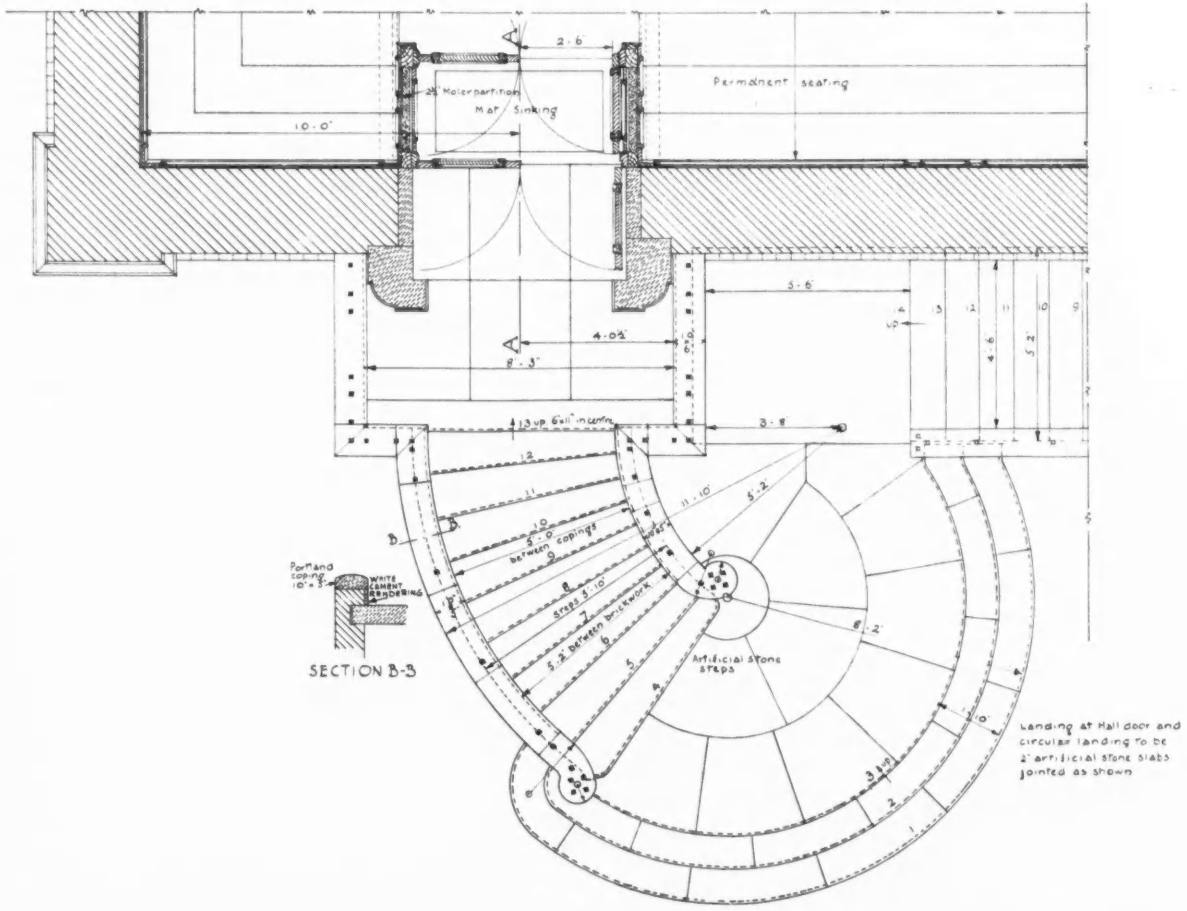




ELEVATION



SECTION A-A



PLAN

SECTION B-B

KEY TO HATCHING

BRICKWORK
STONEWORK
CONCRETE
MOLERPARTITION AND KLEINE FLOOR
WOODWORK
PLASTER AND CEMENT RENDERING
IRONWORK

shown solid black

[*H. M. Fletcher and Godfrey Pinkerton, Architects.*

SELECTED PRECEDENTS:
FROM THE GERMAN COALFIELDS

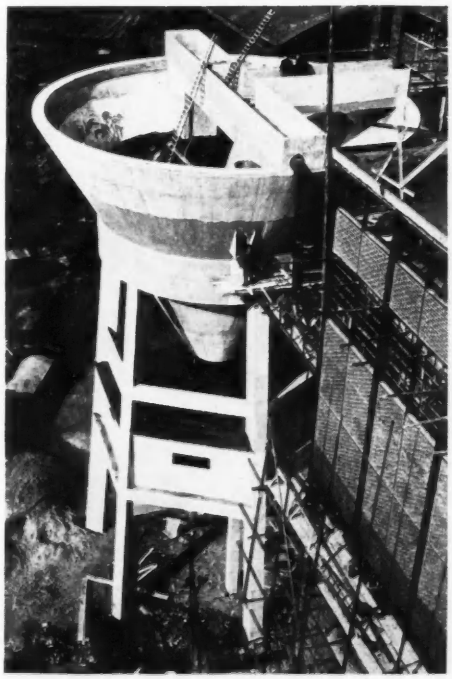
[The late Adolf Fischer, Architect.

1. STORAGE BUNKER, FRANKFORT-ON-MAIN COKERIES.

2. COOLING TOWER, MINISTER STEIN PIT, DORTMUND.

THE incidental structures characteristic of German pit-heads and gasworks are usually far better co-ordinated and designed than those familiar at home. To ensure the utmost economy and efficiency in operation, screening, washing and coking plant, and coal and coke bunkers, are constructed as separate units, linked together by overhead travelling conveyors. Gravity plays an important part in the various manipulations of coal from the working face in the mine to the loading of railway trucks or gas retorts. The verticality of these structures is therefore simply the logical expression of their functions.

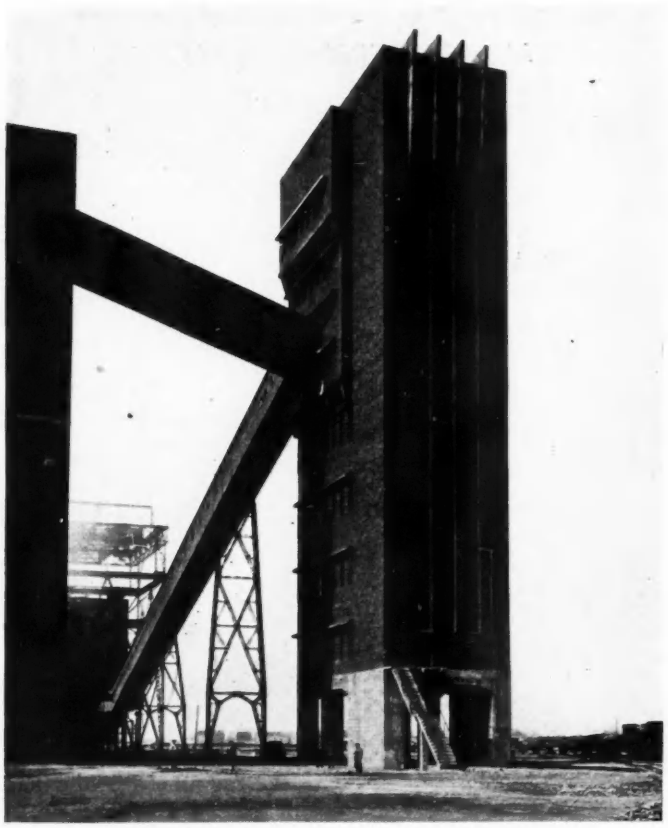
All the five structures illustrated evince vertical emphasis of one kind or another. In figures **2** and **3**, both of which were designed with a marked oblique batter and are hexagonal in form, this is embodied naturally in the type of construction adopted. In the former, at once the most architectural and symmetrical of the examples shown, the upward thrust is stressed by the salient arrises at the angles of the brick-faced cooling tower; while in the latter the rectangular section of the free-standing legs of the slanting



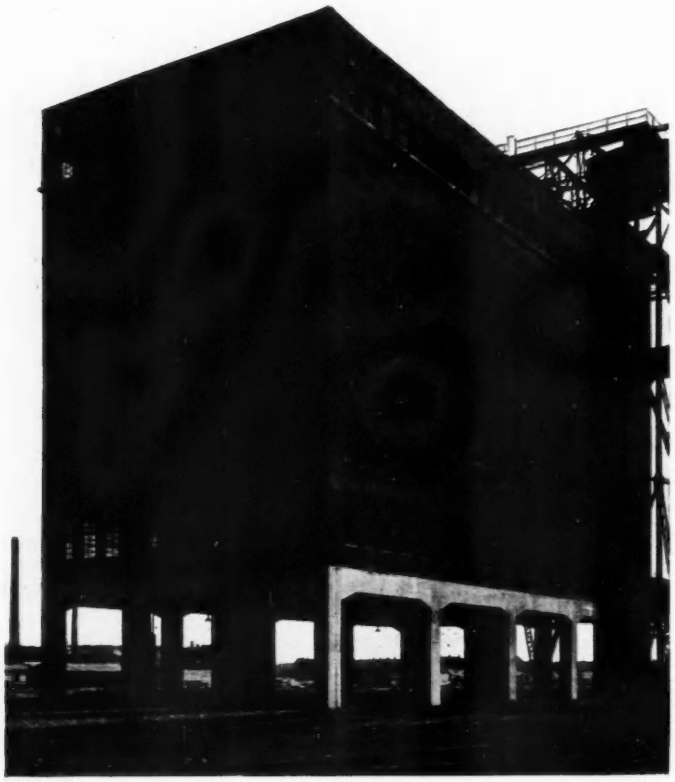
3. REINFORCED CONCRETE COAL-WASHING SIPHON IN THE RUHR.

trestle frame produces an identical effect. In figure **4**, the vertical emphasis inherent in the shape of a tall and narrow building is heightened by a triple longitudinal window of great depth, and the splayed-out concrete flanges in prolongation of its mullions which fret the summit into a semi-castellated silhouette. In figure **5**, a twin structure to the last (though differing from it in form and function), which looks rather like a mediæval keep, the same vertical accentuation, if in minor key, is obtained by repeating the band of louvred openings running round the arcaded base underneath the roof parapet; and further enhanced by the buttress-like projection, containing another longitudinal window that stretches to the top of it, flanking one corner.

In figure **1** this dominant emphasis appears less conspicuous because the roof is of the coved "wagon-top" type. It is, however, plainly discernible in the four "organ-pipe" corrugations surmounting the middle opening, the pattern of the longitudinal ventilating slits close to the top, and the chimney-like protuberance of the coal-chute. P. MORTON SHAND



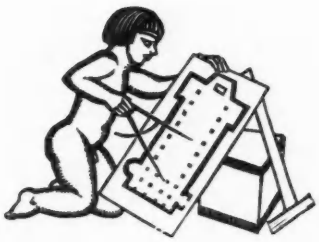
4. *STORAGE SILO, NORDSTERN COKERIES, HORST-EMSCHER.*



5. *MIXING BUNKER, NORDSTERN COKERIES, HORST-EMSCHER.*

(All photos by courtesy of "Hochtief," A.G., Essen)

THE ARCHITECTS' JOURNAL



WEDNESDAY, AUGUST 26, 1931

LUCK AND TEMPERAMENT

WHAT attributes go to make the successful architect? As in the old Battle of the Styles, partisans range themselves, for the most part, pretty evenly into two sets: those who believe that man is "captain of his soul," that success comes from within and not from without; and those who believe that success is fortuitous and outside man's control. Like the combatants in the Battle of the Styles, too, it will be found that adherents are divided, not so much by a difference of opinion as by a difference of temperament, so that reconciliation by means of argument must remain an impossibility.

Let us take the case of two young architects, Smythe and Jones, who set up office side by side. Into the office of Smythe there comes a rich aunt, upon philanthropy bent, who commissions her nephew to design a Home for Indigent Females of Gentle Birth. He does so, incidentally delighting his aunt and beautifying his native town. The immediate result is a trickle of commissions, which trickle develops into a flow, a stream, a deluge; and in thirty years Smythe has more work than he can cope with. Jones has no rich aunt, nevertheless he succeeds, in the course of a year or two, in landing a client who wants a country house; a testy, unscrupulous tradesman, who on some trivial grounds brings an action for negligence against his architect. The client loses his case, but Jones loses his reputation, and his exiguous capital, in costs, and applies to Smythe for a post. He gets taken on as one of Smythe's increasing staff of draughtsmen.

In another town two young architects, Browne and Robinson, have adjacent offices. On a certain day they are both invited to join a panel of local architects to design houses for a large local authority's housing scheme. Browne's houses are an immense success. They add to the amenity of the district, the tenants are delighted with the internal arrangements, the contract has been handled with tact, and the price is moderate. Browne's next job is the local Cottage Hospital, and by degrees he becomes the leading architect of the district. Robinson's houses, on the other hand, are failures. Although they are by no means ugly, the planning is full of those pinpricks of inconvenience which are—not surprisingly—so irksome to the housewife; moreover, there is constant friction with the contractor, and, at the outset none too cheap, the houses become intolerably expensive owing to the addition of countless extras. Thus Robinson fails to make good, and in a few months applies to Browne for a post; and *he* gets taken on as one of Browne's increasing staff of draughtsmen.

What are the qualities, the presence of which made Smythe and Browne successful and the absence of which made Jones and Robinson unsuccessful? Assuming that Smythe had no say in the selection of his parents, the possession of a rich aunt bent on philanthropy was a piece of luck quite outside his control. Not so the handling of the opportunity which chance gave to him. Here he displayed his good taste, his skill, his technical knowledge, his tact and his patience; but he had an easy client to deal with, and money was plentiful. Jones was unfavoured by chance. His client was shrewd, parsimonious, unscrupulous, and possessed execrable taste, against which Jones's good taste, skill, technical knowledge, tact and patience availed him nothing. Had chance given him a rich aunt, then doubtless, all would have been well. Had Smythe—with his equal inexperience—been given Jones's first client there is little doubt but that he, too, would have come a cropper.

Browne and Robinson, however, started fair. Chance favoured neither of them, but Browne succeeded because of his greater skill, his greater capacity for grasping essentials, his better taste, his more pleasant manners, his keener insight—in fact, on account of those qualities which make for success generally; and Robinson failed because of his lack of them.

In architecture, indeed, as in most walks of life, half-a-dozen men owe their success to a piece of quite fortuitous good luck, whereas six men owe their success entirely to their own endeavours. The fortuitous circumstance, however, by itself can do nothing for a man unequipped to take advantage of it. Good luck may aid, bad luck may thwart; but luck can do little for the architect who is unwilling or unable to help himself.

THE STROLLING AUDIENCE

A correspondent's letter, printed in this issue, advances a plea for a new promenade theatre. Even in England, much more abroad, there has always been a certain feeling in favour of listening to music and plays in conditions freer and easier than those afforded by the formal seating in theatres and concert halls. The recrudescence of pageants and the folk-dance movement, all up and down the country, the open-air plays in Hyde Park, are present evidences without doors, and within are promenade concerts, cabaret shows and the like. The idea is, in fact, of honourable antiquity. In the National Gallery is the painting belonging to the Bibiena school (early eighteenth century) reproduced above, showing the interior of a theatre, with a stage of noble proportions, and elaborately architectural scenery, set for "Othello." The point about it is that the audience, seen in what we should term the pit, is actually shown standing and strolling; there is no seating in view. The time is perhaps ripe, as our correspondent suggests, for history to repeat itself, here in London.

NEWS & TOPICS

THE HEAVY-WEIGHT BUILDINGS IN THE CITY

I HAVE never seen a building that, having satisfied the conditions of plan and structure, was devoid of some striving after effect. By satisfying the conditions of plan and structure I don't depress these conditions, but make *them*, and not effect, the ruling motives, even as they rule in the design of what are called purely engineering structures. That is why I think Sir Owen Williams, in his recent letter to *The Times*, spoke only a part of the truth in condemning the heavy-weight buildings in the City; and why I think it the greater pity that he was denied the opportunity of designing the Dorchester Hotel on the conditions which the building owners and the state of society today presented, for it would have been a double revelation.

*

I am not seeking to crab Sir Owen Williams in any way, because he is right, if ever a man was right, to see in these enormous classical palaces and in the mass of modern building in London a colossal waste of time, material and money, as being erections devoid of the spiritual quality that might alone serve to commend their extravagance. I hold firmly to the necessity for a spiritual quality in any building that hopes to hold even one man one minute out of his normal course, and what I take Sir Owen Williams to stress in his letter is the foolishness of hoping that surface effect can ever be more than on the surface.

*

Architecture in England is all wrong so long as it pretends to derive its source from old models instead of from plan and structure, and it is never so all wrong as in that home of architectural stupidity, the City of London. And architects know it, though they have not the strength of mind to say so in the hearing of their clients. English architecture, if it is to have any future at all, must be a deal more honest than it is today.

THE FETTERS OF A BUREAUCRATIC SYSTEM

The truth is that we are fettered by tradition, and our chances of recovering sanity are the poorer in that we have allowed an increasing proportion of building to drift into the hands of a bureaucratic system. With the economics of the system I am not for the moment concerned, except to note that it is now found possible to cry extravagance at the appointment of an architect to a public building—as in the case of Mr. Berry Webber being asked by the Kent County Council to design certain work for them, whereas they may already employ a permanent staff of twenty-seven architects to build schools and other work. The point at issue is the quality of work produced under the official system and the chances of rapid development in ideas. I think these chances are poor.

THE COST OF BUILDING

The cost of building today is about 85 per cent. above that in 1914, and one frequently hears vague complaints that the present prices ought to be lowered. A recent article in *The Times*, after analysing the causes of the increase, holds out no immediate prospect of a return to pre-war prices. Before the war, although wages had been rising, the increasing use of machinery offset the wages, until in 1913 a point was reached where the machine could do no more. In 1914 a parlour house could be built for £180, about £90 of which represented the cost of labour; today such a house costs £330. The article goes on to show that since 1914 the combined wages of a bricklayer and a labourer have jumped from 1s. 2d. per hour to 2s. 7½d. per hour, an increase of 120 per cent. Materials have not risen in the same proportion, since the total increase in cost of the house is only 85 per cent., and there is little hope of any drop in this item as long as the wages for getting, haulage and manufacture remain at their present level.

*

Shorter hours have added to the builder's overhead charges, which are still further inflated by the various insurances for social service: it obviously costs more to employ fifty-four men for forty-six hours a week than forty-six men for fifty-four hours a week. Wages in the building trades are not likely to be considerably reduced at the present time, and the level of prices may therefore be regarded as stable for some years. Thus the decision to hold up building work in the expectation of a rapid decline in costs in the near future will probably not prove to be a wise one.

BRICK *v.* STONE AT CHIPPING CAMPDEN

There has been an amusing duel in progress in Chipping Campden during the last six months between the local council, who want to build some cottages in the cheapest available material, and the Campden Society and other local intelligentsia, who want them built in stone, even though they should cost more thereby. I have not seen the houses in question, neither do I know the nature of their position except that it is in Station Road, where other red-brick houses stand to shame the earlier apathy of the Campden Society; but I think the argument of the Council is unassailable, for they say, in effect, if they give way in the first instance, who is going to pay the extra for stone in future cottages? Which obliges the Campden Society to plead that Chipping Campden is a show place and that the extra cost is worth it.

*

But how melancholy are these efforts to keep dead tradition alive in face of the steady pressure of a changed economic system! It is a sad fact that the face of rural England must reflect the changes of economic structure, but we are better employed in trying to work the new system properly than in exercising our time and money reviving that which has no life of its own. Under the circumstances that at present govern the design of cottages, I devoutly hope that these may be eventually built of stone.

BARBERS' SHOPS

The ancient gate of the Inner Temple has been closed for several days because a lump of stone fell on the head of a girl. The notice on the Temple gate, in language which is itself a most precious relic, states that the gate is closed "because of a dangerous structure *beyond*."

*

Actually, it was part of the adjoining Rainbow Tavern that fell, and the tavern is a mere Victorian affair, and no worthy part of the ancient fabric of the Temple. It used to be a barber's shop—a pleasant place to sit back in, for it has a beautiful ceiling, for the appreciation of which only a leisurely shave could allow time fit and proper.

Barbers' shops are coming into their own again today when one considers the *illuminated worm* of Austin Reed's master barber shop in Regent Street, and its contribution to the enjoyment of shaving.

★

But I have wandered far *beyond* the Temple Gateway into the more interesting topic of barbers' shops. An interesting topic, but not altogether architectural. There is a barber's shop in the Royal Opera Arcade that preserves its Regency tradition absolutely intact; and there is another in Chelsea with a ceiling made up of a mixed assortment of plaster casts. Both architectural subjects in a sort of way, though I don't think I had better pursue the subject further.

CLOTHING THE STEEL CAGE

The architectural treatment of steel cage construction is a matter upon which many disagree. If, after the modern

The Kaufhaus Breuninger at Stuttgart, under construction.

English fashion, one is to conceal the whole frame behind a shell of brickwork, besides flouting the disciples of Ruskin in a way which must give them great pain, one adds an unnecessary load to the frame itself. If one reveals the construction in all its nakedness, one will produce, inevitably, a façade upon which the upright and horizontal lines are almost equally emphasized—a kind of chessboard which the greatest genius cannot imbue with architectural distinction. Perhaps the solution offered by the Kaufhaus Breuninger at Stuttgart, of which the supplement with the issue for July 15 has brought me, from a correspondent, the accompanying progress photograph, is the best one : that is to say, to conceal the horizontal girders, and show the upright ones. That certainly accords with the requirements of the plan. A large shop of this kind obviously requires as much light as possible. What little external clothing the designers have conceded to notions of decency has done no more than to plunge the shopman's feet in shadow. It will be noticed that the blocks of travertine employed on the façade are jointed vertically ; this has the advantage of showing clearly that this material merely acts as a surface panelling and plays no part in the construction.

MITIGATION OF FIRE RISKS

I have before now commended to my readers' notice the fire-preventive measures advocated by Dr. F. J. Waldo, the City Coroner. In the S.P.A.B. annual report just published reference is again made to them. It may be remembered, says the report, that at the last annual meeting of the Society the late Mr. Spanton spoke urging the Society to point out to the owners of fine old country houses some of the dangers and risks to which they are subject by fire. As a consequence the Society sent a letter to the Press in the early autumn, reminding the public of these dangers. As a result of this letter, Dr. F. J. Waldo, His Majesty's Senior Coroner for London, wrote to the Society giving it the results of his experience in the City of London.

★

Among the extracts from Dr. Waldo's letter published in the Society's report are the following : " . . . I entirely agree with you as to the danger of obsolete flues and old-fashioned electric lighting wiring, which are in not a few instances responsible for the mischief. I have often suggested the use of big tanks of water on the roofs of country houses, worked automatically by sprinklers in places where water is scanty or absent. . . . For several years past I have suggested to the Corporation of London the compulsory use in all new City buildings of the model Rules and Regulations for electric wiring of the Institution of Electrical Engineers. I was pleased to see that you approve of the unique City of London Fire Inquests Act, 1888, which gives power to the City Coroner to hold inquests—with juries—on any fatal or non-fatal fire officially reported to him under the Act as having occurred in the City; with power also, to commit for arson or incendiarism on the verdict of a jury. I find that the Act works as a strong deterrent against arson and neglect—short of wilful fire-raising. . . ."

A FLIGHT OF TOY BALLOONS AT LLOYDS

The scene, you are asked to believe, is the Room at Lloyds. Upon the eyes breaks the spectacle of a number of brightly-coloured toy balloons making a wavering ascent to the ceiling; upon the ears, something like a cheer. Yet is this cheer not altogether a tribute to frivolity, and the experiment has a serious aim. It is to discover, if not the origin, at least the prevailing direction of certain draughts which have proved persistent and of sufficient force to blow papers about the desks in the boxes in that august department. Underwriters are congenitally disposed to shiver at the onset of tempestuous weather : they have too much at stake to endure it without certain misgivings. That the present investigations may lead to a permanent cure may be devoutly hoped.

REBUILDING THE PEOPLE'S PALACE

It is good to know that the Charity Commissioners are to hold a public inquiry into the question of the rebuilding of the People's Palace, Mile End Road, which was partially destroyed by fire. There has not seemed to be any proper justification in keeping the place closed for so long to the people for whom it was originally built; and the inquiry is long overdue.

ASTRAGAL

DEPTFORD OLD TOWN LIBRARY

DESIGNED BY A. W. S. AND K. M. B. CROSS

The main entrance front to Clyde Street, which is adorned with cherubs' heads carved in Portland stone; and a nearer view of the doorway. This is treated as a separate feature, and has a copper-covered cupola and bronze finial.

THE main walls to the front elevation of this building are faced with multicoloured bricks, obtained from various sources, and the roof to the front block is covered with Lombardic tiles. Portland stone is used for the construction of the main cornice, window dressings and sills, and a Portland stone plinth carries the base of the front wall.

The foundation stone is laid under the central window, and two circular medallions in Portland stone are carved in the form of cherubs' heads to symbolize a prominent department of the library: that devoted to children.

The principal entrance to the building is treated as a separate feature in the design, and additional emphasis is obtained by a copper-covered cupola and bronze finial. The panelled entrance doors are of teak, with bronze door furniture.

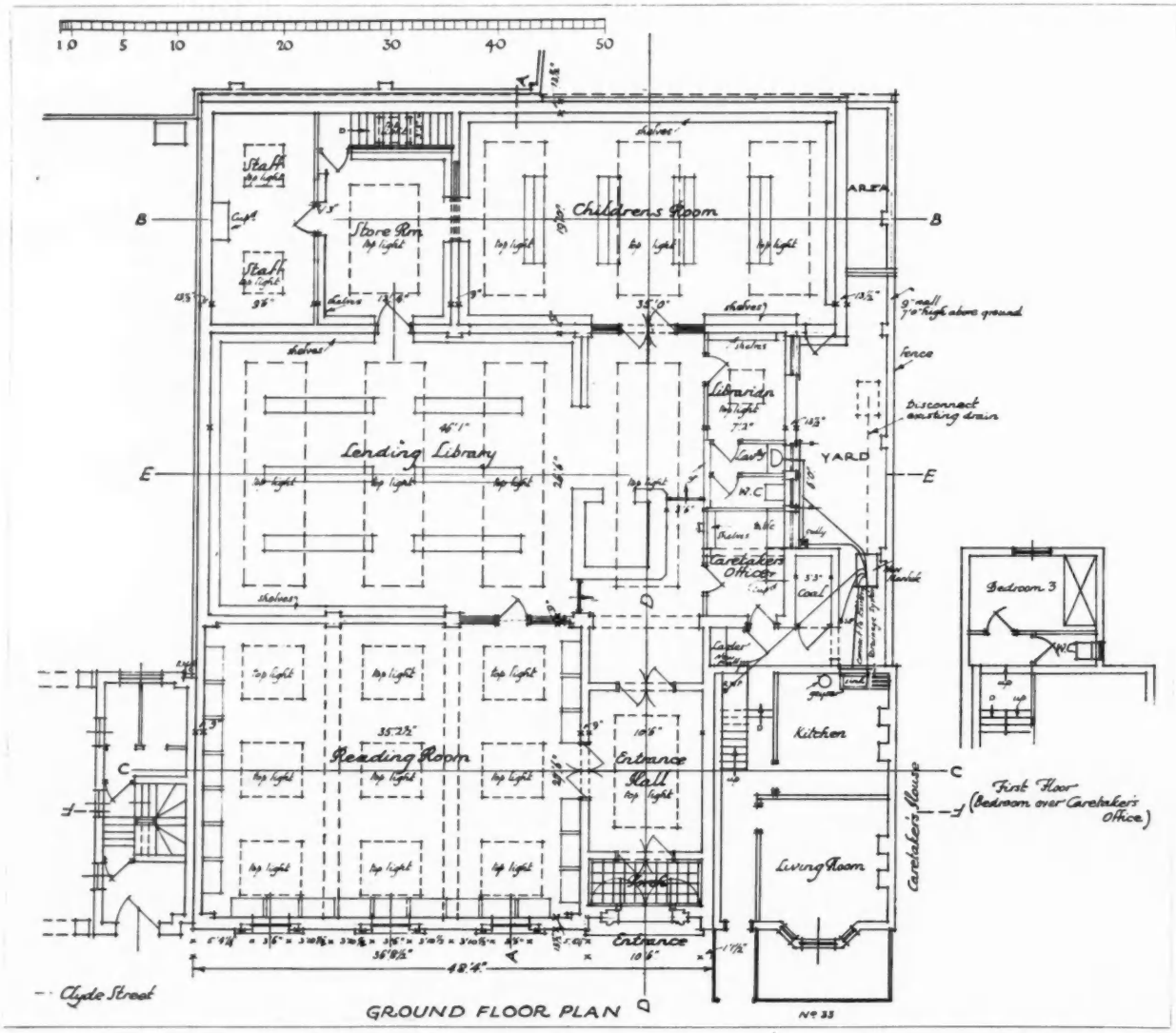
Internally, the entrance hall is reached through a small marble-paved lobby, and from the hall access is obtained to the reading-room and to the lending library.

In the reading-room natural illumination from ceiling lights is employed, supplemented by windows overlooking Clyde Street. Reading desks for newspapers are fitted around three walls, and tables and chairs occupy the central floor space, while a magazine rack is fitted in one corner of the room. All the fittings and the internal doors are in plain waxed oak.

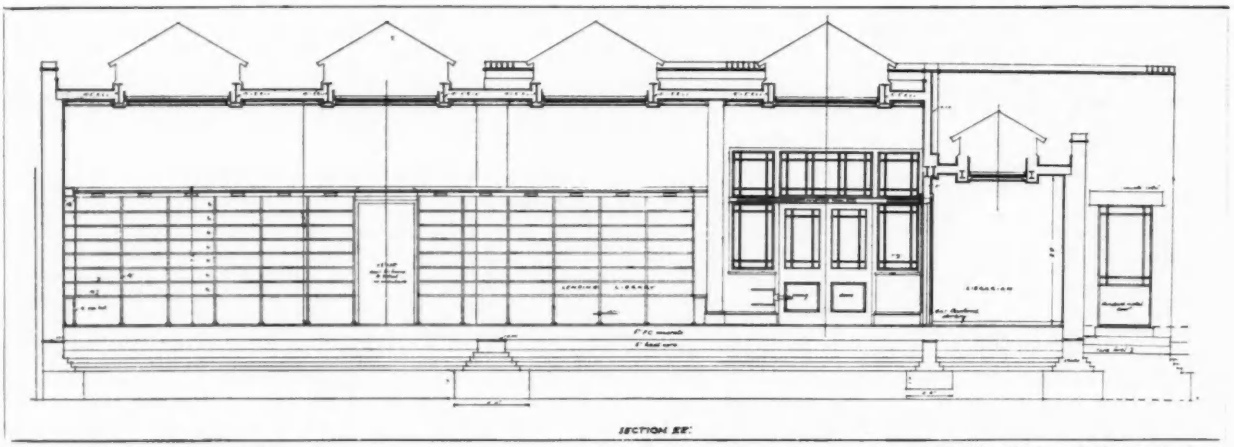
The lending library is reached through a small wicket control gate, which adjoins the issuing counter, and the walls are lined with oak book stacks, six independent stacks being arranged in the central floor space. Here, also, top lighting is employed and an even distribution of light is obtained over the room. The floors to all public rooms are of patent wood blocks, specially treated.

Adjoining the lending library are the librarian's room and the caretaker's office.

The approach to the top-lighted children's room is also controlled by the same wicket gate which serves



The ground plan reveals at a glance a layout conspicuous for its convenience and comfort. The arrangement of the public rooms is such as to ensure ease of working and supervision; and they are all top-lit. In a small basement under the children's and store rooms is further storage space, with a lavatory. Some of the caretaker's living-rooms are in the existing adjoining house on the right.



Deptford Old Town Library, S.E.] [*By A. W. S. and K. M. B. Cross.*

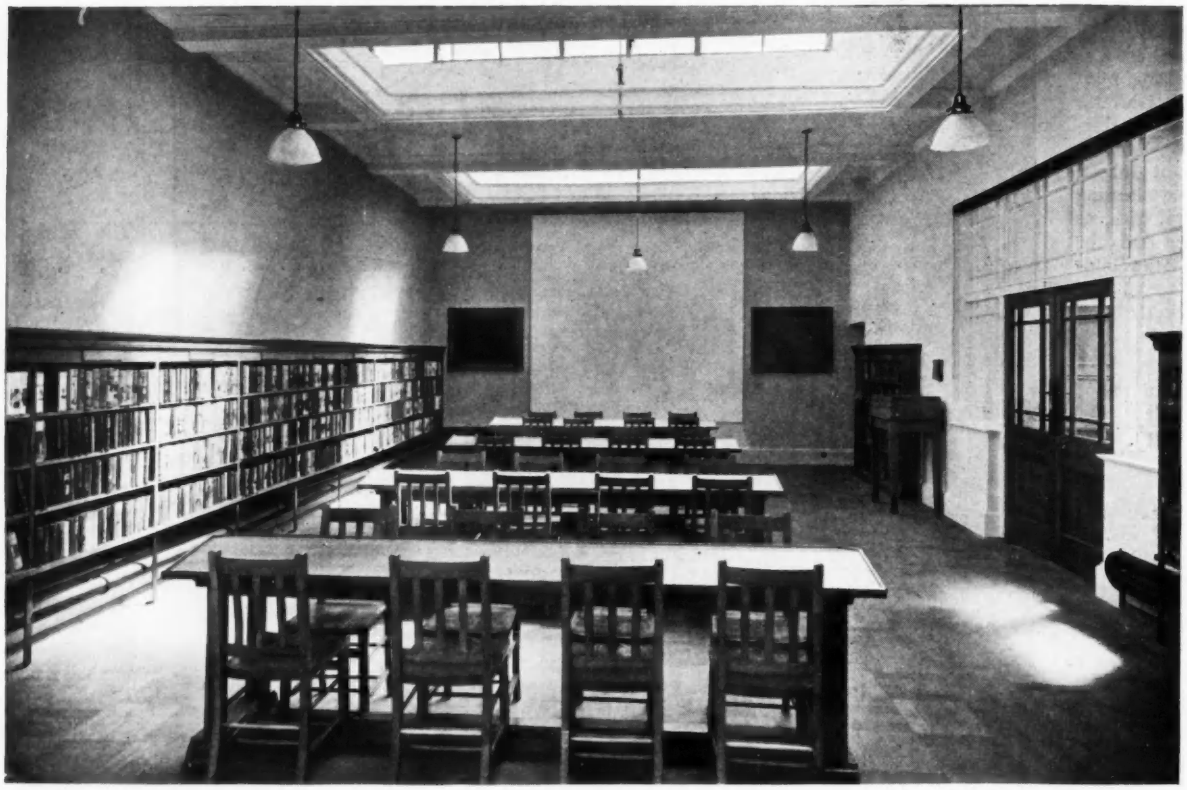
A longitudinal section through the lending library, on the line E-E of above plan. The walls of this room are lined with book stacks, and six more independent stacks stand in the floor space. A photograph of the lending library and detail drawings of some of the library fittings and furniture, there and elsewhere, designed throughout in oak, appear in a supplement accompanying this issue.

A view in the entrance hall, which is approached from the street through a small marble-paved lobby. Straight ahead is the lending library, with, at its far end, the door to the children's room. The newspaper room is on the left. The building being mainly of one story, top lighting is generally employed.

[*Deptford Old Town Library, S.E.*]

[*By A. W. S. and K. M. B. Cross.*]

The newspaper room is equipped, like the other public rooms, with library fittings specially designed in oak, with a plain waxed finish, by the architects. Three of the walls carry sloping reading desks, and double sloping tables are arranged on the floor. Entrance from the hall is on the right; to the lending library itself, on the left.



Deptford Old Town Library, S.E.] [*By A. W. S. and K. M. B. Cross.*

The children's room, entrance to which is through the lending library, indicated on the right, under control of a wicket. The walls are fitted with dwarf shelves, and a lantern picture screen has been provided on the farther wall.

the lending library, and here miniature wall shelving is fitted along four walls and reading tables again occupy the central space.

Store and staff rooms are also provided, and there is additional storage accommodation in the basement. The existing house adjoining the new building has been repaired and redecorated, and, after the addition of a new bedroom and offices, now forms the caretaker's residence.

QUESTIONS THAT ARISE

Canadian Timbers

B. G. writes : "*Observing the interesting data recently given in your Journal with regard to Empire timbers, I should be glad of information as to whether Canadian soft woods can maintain their commercial position in this country, so that an architect can specify this timber without asking his client to pay an excess cost over other wood of a similar nature and quality.*"

Besides the exports to the Empire, Canada supplies the United States with over one thousand million cubic feet annually. The Canadian Forestry Department have reported that easily accessible timber is being rapidly depleted, and that increased transport costs from further inland forests may eventually raise the prices.

Although there is enough timber in Canada to meet all demands for many years, any increase in cost will naturally go against the commercial use of Canadian wood in England unless the price of European supplies rises proportionately, either through stringency of supply or by means of a preferential Empire Tariff. J. B.

Correct Template

B. and S. write : "*A difficulty has arisen over the liability for making a correct template for some special hip tiles required for a square bay-window roof. The roof is a very steep one, and several attempts have been made to obtain the correct angle tiles. The general contractor for the building gave the angle to the tilemakers in the first instance ; when the tiles arrived on the site, however, they were found to be the wrong shape and pitch. The tile makers then sent their works joiner to prepare a template, but when the tiles arrived on the site they were again found wrong. Lastly, the tiler, who is a sub-contractor to the general contractor, was instructed to meet the tile maker's joiner on the site and make a proper wooden template. The tiles are now correct, except for some of the wings which have curled up. We should like to know who is responsible for the making of a correct template (wooden) ?*"

There appear to be three people concerned—the general contractor, the tile maker, and the tiler. The latter can presumably be dismissed, as an employee of the contractor. I should say that responsibility for obtaining hip tiles suitable to their position rested with the general contractor, and if the pitch of the lay were exceptional to the point of needing specially-made hip tiles, he should have drawn the tile maker's attention to that point when ordering, and requested them to prepare and offer up templates. If, after this precaution, tiles did not fit, responsibility would rest with the tilemakers. In the circumstances related, it rather appears that the actual fault was with the tilemakers, at any rate, after their own employee had failed to make a serviceable fitting after visiting the site.

It is inferred from the statement of circumstances that the endeavour has been made to procure an exact angular intersecting hip tile. This is always difficult, and results are usually unsatisfactory, owing to irregularities produced by firing. The old men knew what they were about when they adopted the cone and "granny bonnet" forms, which are adaptable without exact fit, and permit considerable variation in shape without disclosing a "botch." E. G.

A NEW MULTIPLE SHOP AT COVENTRY

DESIGNED BY PERCY BARTLETT

THIS building has recently been completed for Messrs. Boots, the chemists. The horizontality of the elevational treatment has actually been determined by the chief requirements of the proprietors' business, which calls for display cases 8 ft. high around the walls. Apart from the loss of space that would have been entailed by the use of vertical windows, these would have admitted strong daylight, which has a most unpleasant effect when contrasted with the artificial light intended to be used for the illumination of the wall cases. The obvious place for the windows, both for light and ventilation purposes, was therefore at the top; and the horizontal treatment naturally followed.

A retail shop should, from the trader's view-point, be as attractive during the dark evenings of winter as in the daylight, and this consideration, too, has had a considerable effect on the design. Seen from without, the horizontal lines are thrown up at night by the self-illuminated windows, by the fascia of white alabaster glass, which may be floodlighted, and by the horizontal lines of red neon lights, in units of three, which occur on the front. A line of similar green light, fitted into a groove in the bronze cornice over the shopfronts, also maintains the general lines. The light tower is frankly a night advertisement, intended to draw attention to the position and nature of the shop, without having recourse to the usual signs.

The external materials are brindled bricks, with wide stone-colour joints. The shopfronts, of black and white alabaster glass, can be as readily cleaned as the windows. The plinths and columns to the entrance are in Bon Accord (black) granite. The shopfront sashes, blind rails and doors are of bronze metal, as is the sheathing to the reinforced concrete cornice overhead.

The interior shopfittings are carried out on the ground and first floors in Tasmanian oak, with Zebrano enrichments, the floors being of ceramic mosaic, laid in a design of lines and bands. The second-floor showroom fittings are painted blue-green, with rubber composition flooring of geometric design.

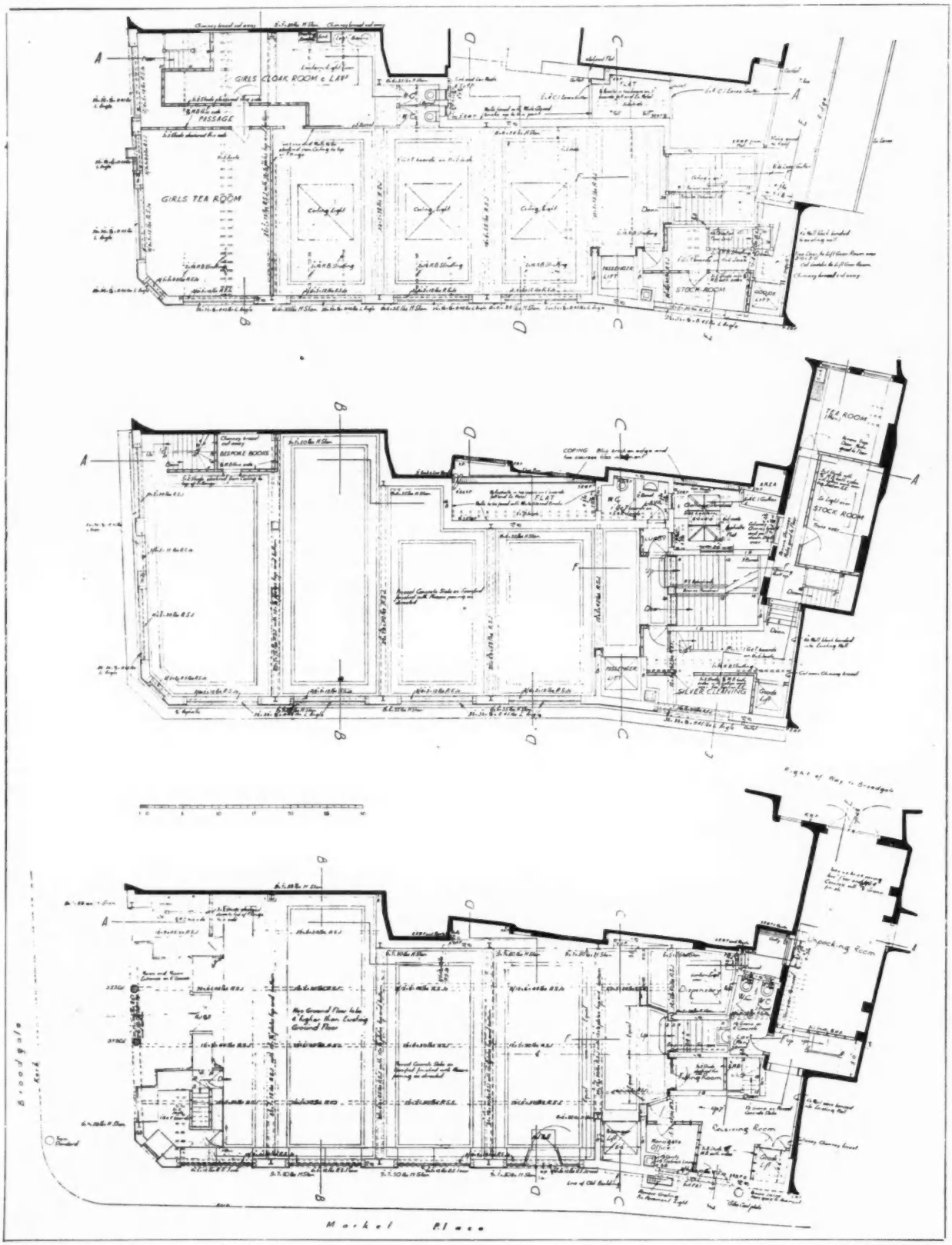
The decorations of the showrooms are carried out in sprayed lacquer paint, in which silver and green predominate on the ground floor, pink and gold on the first floor, and on the second floor ivory and silver.

The stairs have black alabaster glass dadoes, with stainless steel ribbon balustrading.

As will be seen from the plans reproduced on the following page, the ground and first floors provide spacious showrooms, with a small dispensary. More shop space and commodious staff rooms are planned on the second floor, while there are additional unpacking, goods-receiving and stock rooms in the basement.

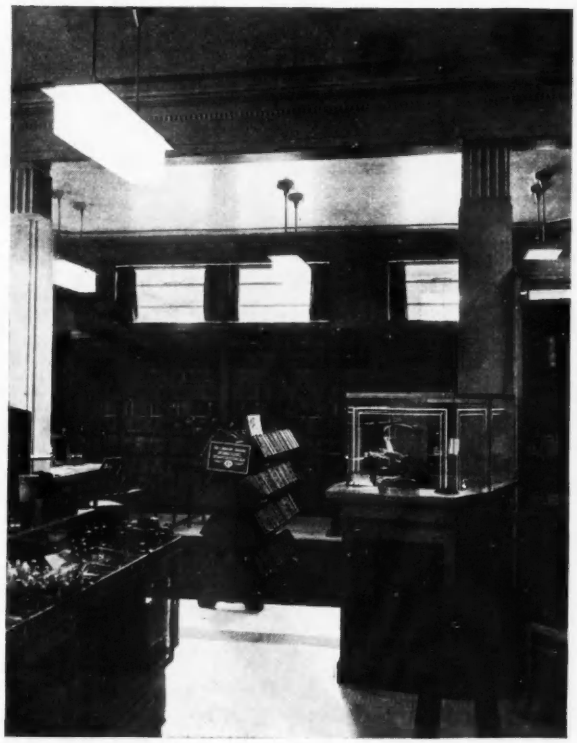
The heating is of the ceiling panel type, and this, with the omission of obstructive stanchions or columns inside the showrooms, allows, without expense, of any rearrangement of the shopfittings which may at any later time be desired.

Two views of the exterior, which has a frontage to Broadgate and a return to Market Place. The horizontality of the design was the logical outcome of considerations of lighting as affected by the desired disposition of shop cases around the internal walls.



Boots Shop, Coventry.] [*By Percy Bartlett.*

Plans of the ground, first and second floors. The main entrance is from Broadgate, and a subsidiary one, with lift adjoining, from Market Place. At this inner end of the shop is the dispensary, close by the main staircase, leading up to showrooms on the first and on the second floors, where there are also commodious rooms for the staff. In the basement further stock space is provided.



Boots Shop, Coventry.]
A view in the showroom, showing some of the wall book cases on the ground floor, eight feet in height.

[*By Percy Bartlett.*
The first-floor landing of the black glass and stainless steel staircase. The door leads to lobby and lavatory.

LETTERS FROM READERS

Art and Industry

SIR,—Your readers will doubtless have remarked the formation of a Board of Trade Committee under the chairmanship of Lord Gorell, to deal with the relationship between art and industry, and in particular the possibility of stimulating industrial design by means of permanent or temporary exhibitions. There has been some criticism in the Press, both as to the terms of reference and the constitution of the Committee, and though personally I should like to have seen the business element with a stronger representation, nevertheless, I feel we should be very ungrateful if we looked such an unexpected gift horse too carefully in the mouth.

The case for the designer has been advocated so frequently in your columns and in those of your architectural contemporaries, that it is only natural that architecture should be represented on the Committee by Mr. Clough Williams-Ellis, President of the D.I.A. Nevertheless, I think the architectural profession as a whole might well give serious thought to the subject, and if possible, obtain the opportunity of putting its views before the Committee. No one has more frequent experience of the effect of good and bad design in everyday life than the architect, and none is engaged in so constant a struggle for common sense, let alone beauty, in the design of our surroundings. Well-designed simple furniture and fittings are still hard to get, and often too expensive, paradoxical though it sounds. Nor will they become readily available to the architect, until they are in popular demand.

It is common knowledge that architects were at the back of the many simple excellently-planned things we saw at Stockholm. We have the talent to do the same thing here, and on an infinitely larger scale. What prevents us planning an International Exhibition in London for three or five years hence, the aim of which will be Design in Civilization? Would it not prove a better stimulus to trade than tariff conferences, or nationalist propaganda? Would it not give the younger generation courage and hope after our present long depression? The architects, whose prosperity is linked with that of the industrial community, are the key men of the new civilization, the dawn of which is undoubtedly breaking. Here, so it seems to me, is an opportunity for the profession to show the way. For any great exhibition the house will be the central unit.

I am aware that a large exhibition means years of preparation and great initial expense. I am aware that our manufacturers are not for the most part ready for it. But temporary and preparatory exhibitions are not out of the question, and with the greater aim in view would commend themselves more readily to the trading community. What is needed is a plan, an objective to work for. NOEL CARRINGTON

A Promenade Theatre

SIR,—A night or two since, being work-bound in London, and weary of it, I had the idea of exchanging, for an hour of relaxation, "frozen music" for the molten variety. I went to "the Proms."

This year, more forcibly than ever, the crowded state of the stalls floor at Queen's Hall recalled that the designation "Promenade" for these popular concerts is one of courtesy only. The condition down there was that proverbial of sardines in the tin. I should have liked to be free to stroll about between times, but decided to take a seat upstairs, where I could at least smoke a cigar without the risk of the ash being knocked into my eye by the elbows of propinquitous sardines.

And, as I puffed at it, I reflected that London has need of a concert hall large enough for promenading to be practicable. It is true that the experiment was tried at the Albert Hall a few years ago; but that is too vast.

The season of Promenade Concerts

only lasts for a couple of months in the year, but why should not the said house be built to be capable of alternative use as a variety theatre, also for a promenading audience ?

AMBULATOR

"Modernist" Architecture

SIR,—Mr. Baillie Scott's analogy between false teeth and "modernist" architecture is entirely superficial. He should know that the endeavour of architects described (for the want of a better word, I suppose) as "modernists" is to avoid falsities of any kind. To my mind, and to the mind of any one who has thought seriously on the evolution of architecture, nothing can be a worse falsity than the reproduction of historical forms which have lost the purpose and significance which gave them sincerity.

JAMES BURFORD

Cavity Walls

SIR,—Your correspondent, W. Beeston, mentioned in your issue for August 12 a very abnormal case of weather penetration to cavity walling. By quoting the severe percolation by way of the chimneys, the case points to either faulty construction or the erection of the house in an extremely exposed position where further precautions against the weather were necessary.

After all, nobody would build hollow walling in a weather beaten part of the country of a similar character to Dartmoor.

Hollow walling has proved to be a sound form of construction, although where inadequate attention has been given to the proper method of construction failures, which are then to be expected, have arisen.

A certain amount of moisture no doubt penetrates the cavity, but unless a very soft brick is used, it should not form a tank for the accumulation of water.

I assume that your correspondent suggests building the two 4½ in. thicknesses direct upon the concrete foundation without any thicknessing at the base, and with that object, suggests taking the walling down further to avoid rising water in the cavity.

Built in the proper manner, there should be no gathering of water in the cavity, and I suggest that the most practical method of construction is to build the base of the wall solid.

This can be accomplished in the cheapest manner by building the two 4½ in. thicknesses of brickwork directly upon the concrete foundation and filling the cavity with fine concrete to a height of 6 ins. below the damp proof course. This method I observed was mentioned in an answer to a query in the JOURNAL some weeks ago.

If there is a fear of accumulation of moisture in the base of the cavity, it is a simple method to leave a number of open joints in the brickwork, below the damp course, as an exit for this.

A considerable amount of correspondence has arisen in the past as to the value of this type of construction; for domestic work I have found the hollow wall a satisfactory method, and cannot understand the reason why a number of clients, laymen to construction, suggest that they prefer solid walling, because practical men with a certain prejudice against its use have informed them of imaginary disadvantages.

G. E. D.

The Pedestal Basin

SIR,—We have read with interest your reader's comments on the pedestal lavatory basin which he had recently installed.

This is quite a common complaint, and we give below our own views, based on our experience.

It is interesting to note, however, that only last week we inspected the drawings for a provisional patent which has been taken out for a special design pedestal, which would appear to solve the problem definitely, and at the same time give the plumber the minimum trouble. This arrangement is not yet on the market, but it will be available before long.

(A) We consider that with ordinary pedestals as now produced, whilst it is difficult for the plumber to thread the supply pipes through, it is not impossible.

(B) Having gone to the trouble of threading them through, we would always feel uneasy as to what would happen if there was a slight leak on any coupling union or in any part of the pipe, as it would be such a difficult matter to remove the pedestal for inspection.

(C) We have seen quite attractive jobs completed where the plumber has carefully "run" his supply pipes up to the taps: he has branched them into the main pipe, running probably close to the floor on the skirting board, and he has put the two branches in close together right behind the pedestal. He has been careful to bend the pipes so that they are nicely concealed behind the shape of the basin, and they are then invisible.

(D) We agree it may not be possible to do this with every type of pedestal: these are by no means standardized, but most of them give sufficient room between the back of the base and the skirting to allow the pipes to be passed.

J. H. LEYLAND
(ROWE BROS. & CO., LTD.)

SIR,—The service pipes referred to in your correspondent's letter may have existed above the floor, and the branches to the basin would then be visible.

On the other hand, the pedestal may have been constructed with a solid base. Speaking generally, however, the majority of British manufacturers construct their pedestals with an opening in the base and a slot in the back, which gives plenty of freedom and space for the carrying of the service pipes and also the waste pipe inside the pedestal. As a matter of fact, a large number of pedestal basins are constructed with this object in view, and this company is constantly supplying pedestal lavatory basins which are so installed.

To carry the services in this manner, inside the pedestal, of course involves a certain amount of scheming and extra work by the plumber, and we can quite understand that in contract work, where the prices are, perhaps, rather cut for plumbing, the plumber takes the line of least resistance and carries out the job in the easier way.

J. R. VENNING
(GOVERNING DIRECTOR,
JOHN R. VENNING & CO., LTD.)

SIR,—We were most interested in your correspondent's letter, and sympathize with his disappointments in connection with the supply and waste connections to his pedestal lavatory basin.

The problem he speaks of is one, perhaps, more for the plumber than for the manufacturer. The waste pipe from the basin can quite simply be brought down through the pedestal, given an up-to-date design. It is, however, generally the practice to pass this waste pipe direct through the back wall, in which case the trap is concealed in the pedestal and the pipe is also almost hidden by it.

The supply pipes to the taps are a rather more difficult problem. It may not always be practicable, or perhaps we should rather say convenient, to bring these pipes through the pedestal, although it may be made to take them, as the modern fireclay pedestals are. The pipes must be brought through the floor directly under the pedestal, so that the plumber should have very early notice of the type of basin to be installed and full details of the pedestal itself.

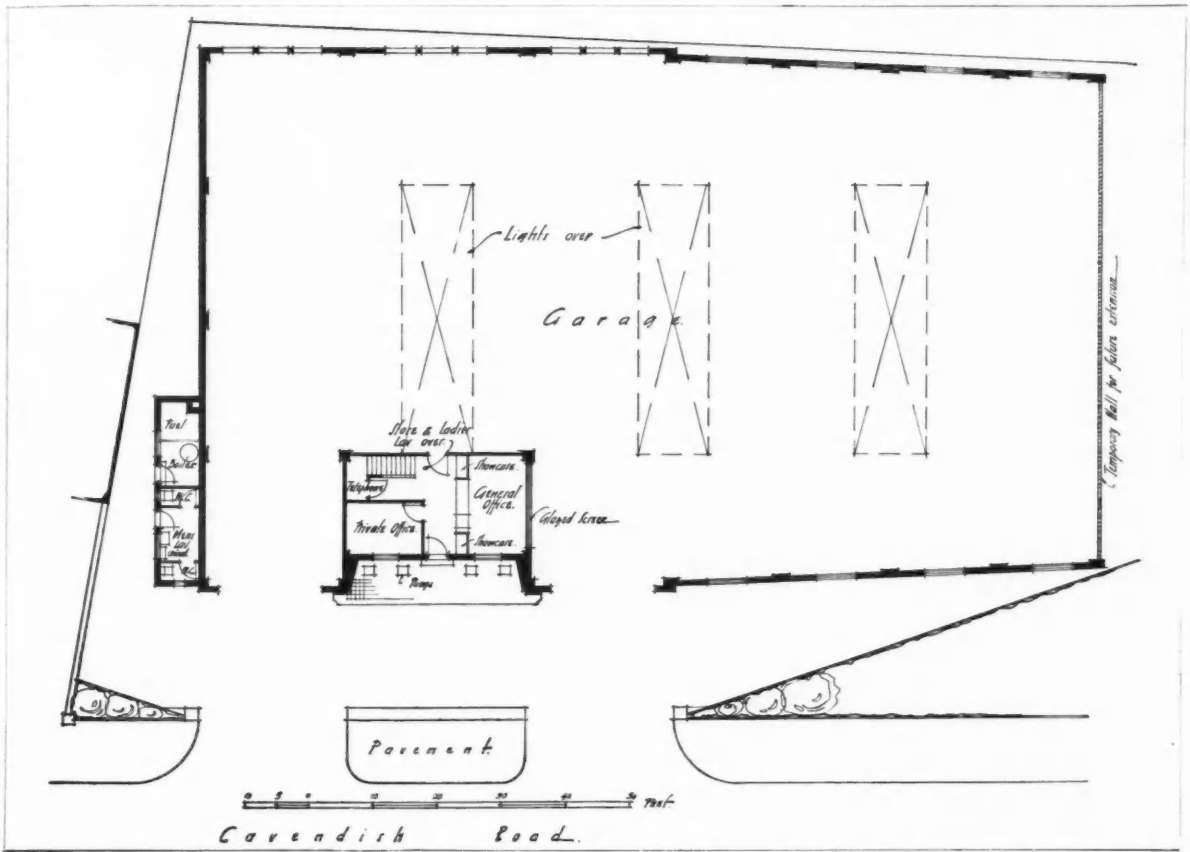
The pipes so placed, however, are rather inaccessible, which may be considered an objection. It is quite possible, even if the pipes do not pass through the pedestal, to place them right behind it so that they are out of sight, and no plumber who took a pride in his work would permit them to "curl." They can be run up the wall within a few inches of each other perfectly straight, and right behind the pedestal a sharp bend can be made close under the basin to the taps on either side, and all can be placed so as to be practically out of sight.

ADAMSEZ, LTD.

GARAGE IN CAVENDISH ROAD, BRONDESBURY, N.

DESIGNED BY G. ALAN FORTESCUE

The walls are built of bricks, finished with white Portland cement, with the exception of the recess, which is executed in hand-made, multi-coloured bricks. The building is roofed with Marseilles tiles with the eaves projecting 18 inches; and the windows are of steel, built into wood frames. The canopy is of wood, covered with lead, and has a recessed light in the soffit.



The garage provides accommodation for sixty cars, and has an entrance on either side of the office quarters. The whole of the exterior woodwork is painted emerald green, and the pumps have been rendered in the same colour to match. The first floor comprises ladies' cloakrooms and storerooms. A temporary wall has been erected at one end of the garage, for future extension.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xiv

A DISASTER

BY KARSHISH

(H. B. CRESWELL)

ENOUGH has been said of the conditions of my employment and of the people I had to deal with at Albion Works; and I will cut the cackle and get to the hosses.

I was now set up with an office comprising rooms for myself, my general clerks and my draughtsmen; adjoining a building yard which comprised a joiner's shop of four benches, fitted with power-driven circular saw, routing, planing and mortising machines, and also comprising various subsidiary shops and stores for dealing with the jobbing and minor works carried out by my foreman of works, Dan Piggott. I was equipped further with a quantities, secretarial, and boy clerks, and as many as five draughtsmen, with whom to keep Piggott going, deal with the considerable inter-departmental correspondence and the innumerable reports and proposals which I laid before the Board of the Company's Directors every fortnight, and to conduct, as architect, the preparation of contracts, and their direction and supervision. I soon organized a routine which left me free to bestow most of my time that was not taken up in conferring with Mr. Stevenson and heads of departments on these last important duties; and employed the admirable system of the Office of Works with great advantage to this end, though the tenacity of purpose demanded was considerable. "Piggott's Hatch" affords a good example of this.

My office was built up against the joiner's shop, at the end of which I had screened off a private bin for Piggott. Afterwards, I put a hatch opening from this bin into my general clerks' office, so that papers could be passed through and communications held without its becoming necessary for Piggott to invade my office or for my clerks to dodge round into his yard. As I found that Piggott talked to my clerks through the hatch and was beginning to give them orders, I screwed up the hatch and put a slot, for passing papers, in the bottom of the panel. This, however, prevented my clerks from knowing when Piggott was "at home" when I wanted him—for he was much about the works; so my next step was to glaze the upper part of the panel. When it was glazed Piggott was, of course, able to overlook my outer office, and me—when I was in it; and he could also observe who my callers were, put two and one-and-half together, make fourteen of it and, with the total, enrich the cloud of poisoned gossip that enveloped the place like a bad smell. I also so loathed the sight of the man that the view of his profile through the glass, aloof yet observant, like a rook on a fence, was more than I could stand. I, therefore, had the glass stippled so that, though his shadow revealed his presence, he could not see us; and I finally finished cooking his goose by fixing a second glazed frame over the first so that he could not overhear, either.

The first building for which I was responsible as architect, at a time when prices were scarcely one-third of what they are now, cost £27,400. This work was the extension of the machine shop of which I have already spoken. It was carried out under three contracts—I. Digging and Foundations; II. Supply of Steelwork; III. Superstructure—which included erection of the steel work. The object of this was to save time, since the first contract could be put in hand before the others were let and while the second was being completed.

It will be observed that the two chief contracts were the first and the third—for the second concerned only the preparation of material; and both these contracts involved me in disasters which, for a year or more, so embittered my life that, when I passed the works in the train as I frequently had occasion to do, I well remember that I turned away my head or shut my eyes to escape the sickness of mind which the sight of them provoked. Although these disasters would not have happened if I had been then equipped as I am now; they were, nevertheless, not due to actual neglect or to any blameworthy oversights on my part, but arose partly from the conditions under which I worked, and partly from a most unlucky conjunction of circumstances which, in one case, landed the Eureka Plough Company in a Court of Arbitration, and in the other put them in difficulties which would certainly have involved them in litigation if I had not intervened and saved the situation, and which did, in fact, involve them, indirectly, in great losses. The story I have to tell is chiefly of interest as an example of the catastrophes which lie in wait for the most devoted architect.

The Albion Works fronted the railway with a formidable parade, in alleged architecture, of great detached buildings filled with forests of steel stanchions carrying traveller-girders from back to front, and "weaver roofing" from side to side. The work involved joining up the machine shop with the blocks on either side of it, and extending the "bays"—as the alleys between rows of stanchions were called—far to the rear. The grazing land at the rear lay at such a slope as made it necessary to excavate for levels to a mean depth of about five feet over an area of about 9,000 square yards. This, with the digging and concreting to foundations, was the work included in Contract I.

The following circumstance must be observed. Piggott, under my directions, re-erected the unclimbable iron fence which enclosed the works, to a position beyond the site of the new building; and the contract stipulated, first, that the contractor should instal and maintain, for his carting, a temporary road from a gate in this fence to the public road; second, that he should also include for such tracks inside the fence as he would from time to time have need of. The tender form, further, included a declaration that the person tendering had examined the site, so that this matter of the provision of tracks will appear to have been clearly set forth; at any rate I do not to this day know how it could have been made more clear.

Six or seven firms, of whom I necessarily knew nothing, were invited to tender, and a certain contractor who had previously done work on the place under the displaced architect, Billington, was successful. Mr. Andrew Gorringe was well equipped to offer a low price; for he specialized in carting, road-making and kindred works, and had, as I was to learn, particular ways of making such work pay. He was a rough-looking, touzled, moth-eaten, grey-bearded man of sixty; and when he came to sign the contract and told me—by way of preparing his ground—that he had never tried harder to get a contract, he seemed to me, though repulsive, a hearty, worthy fellow; but, later, he impressed me as looking more like the sort of thing one finds in a bad nut. He was, however, as I learned, a very religious man—a conspicuous member of a special distillation from Nonconformity, which lived publicly in the odour of its own sanctity, rejoiced in its salvation, and let its light shine before men; and when Mr. Andrew Gorringe gave five hundred buns to a school treat, the event was announced by a special paragraph in the local paper so that men should know his good works. This, then, was the man; and, though I found little good in him myself, it is right that I should do justice to the esteem in which he was held by others. I will not say he was a dishonest man: he was no

doubt honest according to his principles, but his principles were not my principles.

Directly the contract was signed he began pressing me to allow him various concessions; but I perceived—as I now well know—that even a small concession may undermine a contract by weakening a radical principle of it; and that an architect may find himself unable to uphold a stipulation of the contract in a material matter, because he has not interpreted it rigorously in a trivial one. I did not make this mistake, although I conceded all that the vital need for maintaining the company's output allowed; but when I found that Gorringe made every inch of ground he won, foothold for a new advance, I got tired of his wheedling and his strainings to warp the interpretation of the contract to his advantage. With the experience I now have, I should yield nothing to such a man, but grip him as one overpowers a monkey, and push his nose down into his job; for his only ambition was to give as little and gain as much as he could, and as long as he thought he could better himself by any other methods than by tackling the work energetically and finishing it, he would use them.

Another mistake I made was in repulsing him with a too stiff display of authority. Once or twice I even addressed him peremptorily in letters as "Sir," instead of as "Dear Sir." This, of course, was the result of the great effort I had made to assert myself: it was a mark of weakness, for if I had had confidence I should have been cool, and not emphatic. Self-control is so much the source of power—being, in fact, the result of power—that it is essential to power. As a result, I awoke Gorringe's hostility; we grew to dislike one another, and our relations became strained. For this, however, there was soon another good reason, for, after he had been at work a few weeks, it was apparent he was behind his contract time—which was five months: in two months he was only about quarter through and his rate of progress, in spite of incessant urgings, was slower than ever; and it speedily became clear that he would never overtake the time he had lost and that he was likely to be two-and-a-half or three months late. It was of enormous importance that the new shop should be available at an early date, to enable the company to take advantage of the increasing demands for their manufactures; and, as things went on from bad to worse, the concern of the directors grew into consternation.

I now learnt a fact that astonished me; and, as I have never since had cause to be reminded of it, that astonishment may be shared by others.

The usual penalty by way of agreed and liquidated damages for each week or part of a week during which the completion of the contract should be in arrears was rather a heavy one—as befitted the circumstances; though it bore no sort of relation to the loss that would result to the company from that delay. The contractor contended that the continual rain prevented him from getting on faster, and that the time he had lost was no more than the bad-weather allowance he was entitled to under the terms of the contract. The ground was clay; the struggles of his horses—with even two tracers—to drag the carts up from the site, were dreadful to watch; and conditions at the tip—where they were sometimes mired and one was lost—were, I was told, even worse. *My* contention was that the contractor had engaged to do the work in the autumn and winter; that the amount of rain was not abnormal for that season; and that the difficulties in hauling could be overcome by maintaining adequate tracks. The truth of the matter was that a larger number of horses or better tracks would have cost more than delaying the work till dry weather came; and that the contractor was merely making a show of working, until those improved conditions arose.

Now comes the point I have referred to. The directors decided that some decisive action must be taken, and I was asked, at a board meeting, what I proposed. I replied that the contractor could not possibly complete his contract; was not making any serious attempt to do so; had not responded to letters formally calling upon him to perform his undertaking; and that the company was empowered, under the terms of the contract, to enter on the works and employ someone else to complete. In this I found I was entirely wrong. Hart shook his head; and a telegram was sent to the company's solicitor, who came down next day, and, in an interview with the chairman, Hart and myself, gave an unhesitating opinion that to take the step I had recommended would be *ultra vires*, and that the company had no power to break the contract. In reply to my objection that it appeared Gorringe was making no attempt to complete, I was told that he might conceivably, by some possible means, still contrive to do so.

"Do you mean that we shall have to wait until after the expiration of the contract date before we can do anything?"

"Yes, quite," he said. "And you cannot do anything then. The contractor is liable, under the penalty clause, in damages for delay; but you cannot break his contract."

"Do you mean that we could not put someone else in to complete even if the contractor delayed completion indefinitely?" I persisted.

"That is so, yes: unless he stopped work altogether and ignored the formal order to proceed," said the solicitor, looking, as I thought, a little bothered and even ashamed of the law he was expounding. "Under this contract you have no remedy for delay except in penalties as fixed and limited by the contract. Yes."

"So that we should be in a better position if there was no penalty clause at all?"

"Well—yes. That is so—if you could find any contractor to execute such a contract, that is. Certainly, yes."

I thereafter learnt that owing to the necessity for time allowance for bad weather, strikes, alterations, etc., it is not possible—strictly speaking—*to make time the essence of a building contract*. All that can be readily done to that end is to divide the work up into sections, or parts; to fix a date for completion of each part separately—such dates to be put forward by prescribed formalities which are, in effect, endorsements on his contract, whenever circumstances arise that entitle the contractor to an extension of time; and to balance the penalty for delay by a bonus for anticipating the dates so fixed. As a matter of practice, however, this procedure is so unmanageable, and depends for successful working so greatly upon such *bona-fide* good intentions on the part of the contractor as would make it unnecessary, that very few architects have experience of it.

The directors of the Eureka Plough Company, however, found themselves so completely at the mercy of their contractor that they, in part, made use of this procedure, and offered him a bonus to relinquish some of his contract and complete the rest six weeks later than he had contracted to finish the whole. These arrangements were made at a board meeting which welcomed Mr. Gorringe with the effect of a session of the Zoological Society honouring a very rare and highly-valued gorilla; and it was then settled that the agreement should be recorded in a letter to be drafted by the chairman, to the contractor's approval. Accordingly, next day, after long chaffering, in which Mr. Stevenson was solicitous and accommodating and Mr. Gorringe surly and suspicious, a draft acceptable to Mr. Gorringe was at last completed and dictated to a shorthand clerk, since no one but its author could decipher the blotted sheet. Before this was accomplished I had the small triumph of catching Mr. Andrew Gorringe out and, for that occasion at least, saving the company's bacon.

The part of the work Gorringe relinquished left two other parts, each

of which was given its separate date for completion and its applicable rates of bonus and penalty; and the need of the company for speed was so desperate that the weekly bonuses were made four times the amount of the weekly penalties. I took no part in the wording of the letter, but merely sat by to confirm, or negative, points of fact. When, however, all was settled, I pointed out to Mr. Stevenson that his letter left it open for the contractor entirely to neglect one part while he concentrated on earning a big bonus on the other. This would have stultified the whole purpose of the company's liberality, and would have been treacherously false to the spirit of the agreement.

"Oh—er—ahem—but Mr. Gorringe would not do *that!*" Mr. Stevenson said, looking at his contractor. That good fellow quickly squinted down his nose, embarrassed, not by my poor opinion of him, but by Mr. Stevenson's good one. He paused a moment, pulling his fingers, before he grumbled:

"Don't see why I shouldn't."

This, as I had suspected, was what he had had in view while the draft was being settled; and it was probably in bitterness at my interference that he shortly after, in reference to previous history, snarled at me across the table with blazing eyes—"Not after that dirty trick he played me."

He no doubt said this to discredit me with Mr. Stevenson, for I certainly had played him no trick, dirty or otherwise, and he had never before challenged me; but I was so deeply concerned to get things straightened out that I had no impulse to protest. I merely looked straight at the man—and without any expression either of surprise or annoyance in my face, as I was made aware by the circumstance that, while I looked, I knew Mr. Stevenson to be closely studying me, which led me to take stock of what there was for him to see. He steadily gazed into my face for at least four seconds—partly perhaps in expectation of my reply—before he remembered himself with a start:—

"Er—ahem—well—er—then, if you agree, Mr. Gorringe, I would suggest—" he began, and he returned to the point under discussion.

I can remember the glow of exultation of that moment. I knew, in spite of the horrible mess we were in, that I had Mr. Stevenson's perfect confidence—not indeed as an architect, but as a man. It was a first triumph after months of discouragement, and I warmed to him from that day. Looking back, I realize that my demeanour must have carried conviction to one of Mr. Stevenson's experience in affairs; for if I had been in the least degree conscious of guilt I should certainly have protested against the aspersion, demanded an explanation, or sought to justify myself.

Unfortunately, I missed another catch Gorringe offered in this little game of his, that was not cricket; and, in the end, our side lost the match in consequence. It was a difficult catch—a late snick into the slips at the moment stumps were to be drawn.

The typed letter had been brought in, and was read out by Mr. Stevenson, and then read to himself by Gorringe who, because it was exactly what he might do himself, suspected that his opponent was garbling what he read. He then raised a new objection.

"But the letter has no such significance as you suppose, Mr. Gorringe," Mr. Stevenson protested. Gorringe was, however, not satisfied.

"Ahem—well, that is easily made clear," said Mr. Stevenson. He proposed a form of a dozen words which Gorringe accepted, and wrote at the foot of the letter—"N.B. It is not intended that"—so and so; I forget what the point was, but I saw that the words cast an ambiguity upon another part of the letter. I could not, at the moment, however, perceive where the confusion lay with sufficient clearness to state my objection; and I hesitated to start the wrangle all over again and knock down what had been so carefully built up. Mr. Stevenson wrote in copying ink; signed; carefully blotted the sticky ink; sent the letter to be press-copied and put in an envelope; and handed it, with a great display of cordiality, to Andrew, who went off to praise the Almighty for his manifold mercies and make the sacrifice of buns already mentioned.

Months later, when the evidential papers were filed, our solicitor said to me—pointing to the place where Mr. Stevenson had so nicely blotted the sheet that the flimsy could not take the words—

"It looks as if something had been written here!"

I had by that time forgotten the circumstances and could not warn him, and we went to the Reference depending on a point which opposing Counsel—with the original letter before him—was able to demolish by the humiliating evidence of our chairman's own hand. Thus it often happens in life. The trivial circumstance of the blotting of the sheet and of its press-copying out of routine by an irresponsible clerk, was material in dishing the company to the tune of two thousand pounds.

I am not going to give the history of this arbitration; but the circumstances that led to it are well worth recounting, for they are unique in my professional experience and display, in a remarkable way, the pitfalls that beset the architect, and the devices by which a dishonest purpose can profit by law to the confusion of justice.

NEXT WEEK: THE LAW'S MAJESTY

The previous instalments appeared as follows:

May 27.	i:	I am Articled.
June 3.	ii:	Episodes of Pupilage.
June 10.	iii:	Episodes of Growth.
June 17.	iv:	My First Job: The Sewer.
June 24.	v:	My First Job: The "Pipes."
July 1.	vi:	I Turn Clerk of Works.
July 8.	vii:	Bradshaw & Son: Builders.
July 15.	viii:	Joe Richards: Foreman.
July 22.	ix:	Trials of a Clerk of Works.
July 29.	x:	A New Venture.
Aug. 5.	xi:	The Resident Architect.
Aug. 12.	xii:	An Architect's Early Gruel.
Aug. 19.	xiii:	An Uphill Fight.

LITERATURE

TWO WREN SOCIETY VOLUMES

IF any justification for the existence of the Wren Society be needed, it will be found abundantly in its last two volumes, the seventh and eighth of the series. These have been issued within a short time of each other and can conveniently be reviewed together, especially as they both deal with Wren's work at the royal palaces.

The value of any organization such as the Wren Society is threefold: it assists scholars directly by the publication of material not easily available, it provides a "clearing house" for any information on the subject that may come to light, and it makes possible the tracing of material that is known to have existed, but which has been lost. It is this last function that has proved so valuable in these two books, as its activities have resulted in the finding, at All Souls College, Oxford, of a fifth volume of Wren's drawings, which had been completely lost sight of. This contains thirty-two large drawings, some measuring 6 ft. long, which are of very high quality and, as the editor says, are "by far the largest and most complete drawings of the Wren period that have survived." The most important of them relate to Whitehall Palace and form a valuable supplement to volume vii. They show Wren's various projects for this great scheme, prepared for Charles II, James II and William and Mary; another series relates to Hampton Court and is supplementary to volume vi. There is also an important set dealing with Greenwich Hospital, which may usefully be considered in conjunction with volume vi. The remainder are of schemes for Windsor, Kensington and St. James's.

From these two volumes we know that Wren prepared at least four schemes for Whitehall. His first idea

is shown, in part, by three drawings which were probably made for Charles II in 1669. It is known that the King intended carrying out his father's idea of building a great palace and of incorporating Jones's Banqueting House in it. John Webb was instructed to prepare drawings in 1661 and Evelyn tells us of a conversation that he had with Charles in 1664, during which the King borrowed his pencil and sketched his idea for a royal palace. The three drawings reproduced in volume vii were prepared by Wren in 1669, soon after his appointment as surveyor. Unfortunately, the plan has been lost and the layout is not clear, although the elevation shows that Wren intended building a pedimented central feature next to the Banqueting House, which was to be duplicated, the two forming the wings of the main building. Charles, however, had other uses for his money and the scheme did not mature.

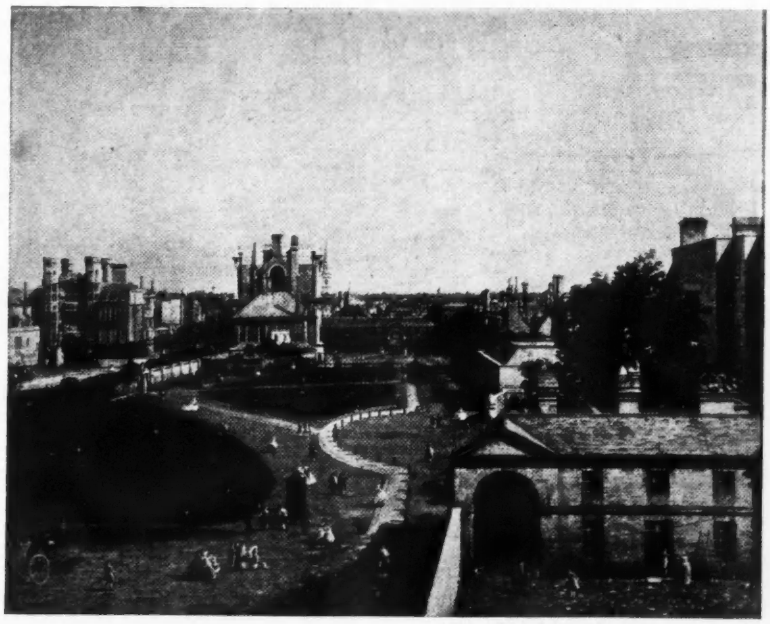
For James II (1685), Wren built a range of buildings adjoining the Banqueting House, at right angles to it, and extending towards the river. The only pictorial record that remains is an unfinished bird's-eye view, possibly drawn for Kipps, which does not, unfortunately, show any details. This building does not seem to have been part of a comprehensive scheme for rebuilding Whitehall, but was hastily erected to meet the needs of the moment, one need being a new Roman Catholic chapel. Although this caused much comment by its purpose and its gorgeousness, no drawings of it remain, excepting the masonry setting out of the elaborate reredos, with carving by Grinling Gibbons and Quelin. After James II's flight it was removed, and later on presented by Queen Anne to Westminster Abbey, where it remained until removed by Wyatt in 1820. Fragments of it now adorn the village church of Burnham in Somerset.

One of the most amusing discoveries that the editors have made is given in volume vii. It consists of a piece of office notepaper on which Wren has sketched alternative elevations for the drawing-room that Queen Mary built on the river in the 1690's. They are done freehand, in ink, and the main dimensions are figured on; at the side are sketches of rustications and balustrades. The building actually erected follows one of the sketches very closely, as is shown in the bird's-eye view referred to above. Wren's drawings for a formal garden on the river front of this little building are also reproduced.

A disastrous fire occurred in 1698, and destroyed the whole of Whitehall except the Banqueting House, which was itself saved with the greatest difficulty. King William then instructed Wren to design a palace to rival the magnificence of the Louvre, and the drawings that he prepared are among those rediscovered at All Souls'. There are two distinct schemes, equally ambitious, and each was built round Jones's Banqueting House. In one case Wren reverted to his original idea of 1669 and duplicated the Banqueting House on the other side of a central feature. The second scheme involved making the Banqueting House into a "centre" by planting a portico of great Corinthian columns on the middle of its river front; it was linked up to the flanking buildings by domed vestibules, circular on plan, around which the same "order" was repeated, with an unhappy effect of loss of scale.

The second scheme referred to above has, as a centre, a portico of four Corinthian columns *in antis*, surmounted by an attic bearing trophies and an equestrian statue — no doubt of William III; on one side of this is the Banqueting House with a replica on the other. This group is joined to the centre and to the wings of the courtyard by four low "links" covered with horrid little domes *à la* Marot. Each of these schemes has advantages and each has defects, but had either of them come to fruition, many of the bad points would have been improved. Wren's preliminary schemes were seldom as good as the executed work.

In volume vii the first Royal palace to be considered is Charles II's building at Winchester, which he started in 1683 from Wren's designs, and which proceeded with remarkable speed until the king's death. It was a large palace, intended as a summer or sporting residence, to be used instead of Newmarket. On the king's death, building was stopped and it was never finished, although Anne intended completing it as a residence for her husband, the Prince of Denmark. Nothing now remains except some fragments that were re-used in the barracks that occupy the site. The illustrations reproduced consist of original plans from All Souls', reproductions of engravings of the buildings either as intended or as they remained in the eighteenth century, and some architect's drawings from the British Museum, all of which show a building of brick and stone. The main block has two internal courts and wings which project to form a courtyard. The editor has endeavoured to make clear the uses of the various rooms in the plan, but this proved to be a hopeless task, even with the help of Wren's own list of rooms provided and the descriptions left by contemporaries, such as Celia Finnes and John Evelyn. In addition to the drawings, the editors have printed a manuscript book of contracts relating to this palace which belonged to Wren; this was recently presented to the R.I.B.A. Library by Mr. S. J. Wearing.



[*From* The Wren Society, volume vii.

Detail from a picture by Canaletto. Whitehall, 1746, showing the position after the great fire of 1698, with the Holbein Gateway, widened in 1723 (pulled down in 1759). The front of Sir Christopher Wren's New Building for James II, 1685–87, faced this way (300 ft. from the Gateway to the Stone Gallery). The Privy Garden occupied the foreground.

A previous volume (v) has dealt at length with the important subject of Greenwich Hospital, but the fifth All Souls' volume had not then been discovered, which is regrettable, as it contains important drawings which illustrate further the evolution of Wren's ideas. He started from John Webb's plan, which he reproduces almost exactly, and from this made various attempts to solve the problem, while keeping open the axis of the Queen's House, upon which Queen Mary was determined. Some very fine plans resulted and the drawings illustrating them are among the best Wren drawings that have come down to us.

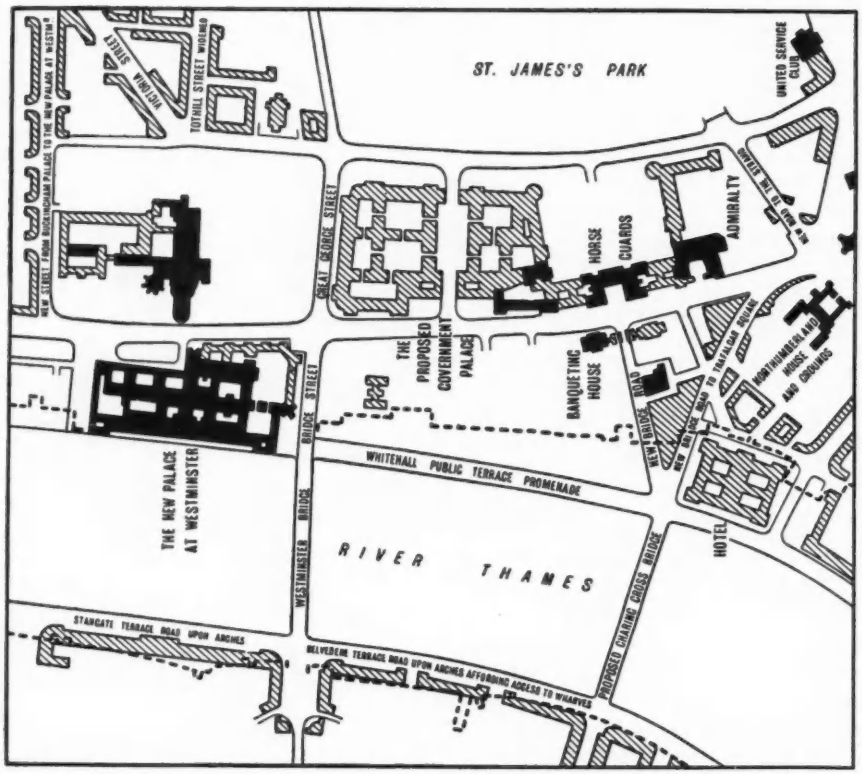
The work that Wren did at the other royal palaces—Windsor, Kensington, St. James's and Hampton Court—occupies much space in volume vii. From the All Souls' collection are a first sketch-plan of Hampton Court, several proposed alterations and a number of drawings of decorative schemes for the rooms. At Kensington Wren did a good deal of work for Queen Mary, who died there. This included the Orangery, which he designed jointly with Vanbrugh, and which may have been intended to form part of a larger scheme. The documents printed from the minute books and the accounts show fairly conclusively that George I's additions were not, as was often supposed, by Kent, who only painted the ceiling of the King's Gallery. In volume vii are given studies for a building at Windsor, which, it is pointed out, is strongly reminiscent of the library of Queen's College, Oxford, and elaborate garden schemes, which would have involved the demolition of much of the mediæval work. These discoveries have enabled the editors to recognize a plan in the British Museum which has hitherto been unidentified. The work at St. James's Palace was in the nature of minor alterations and was not important.

The editors have, as usual, done their work in an exemplary manner and have gathered together all relative material on the subject under consideration. In volume vii there are no fewer than 255 pages of text which, besides the contract book of Winchester Palace, consists of extracts from building accounts from the Record Office and excerpts from the minute books of the Board of Works, which often prove valuable in assessing the relative share of the architects of the Board in any particular work. Extracts from diaries and memoirs and contemporary prints are reprinted, and everything else that helps the reader to get a mental picture with the least waste of time in hunting among the works of the period, which, after all, he may not find easily available.

The longer the society exists, the more obvious is the value of its work. Had it larger funds, it could do its work quicker than at present, and it is to be hoped that everyone interested in architectural scholarship will subscribe the guinea a year that entitles them to the society's volumes, which, incidentally, are extremely good value for the money.

GRAHAME B. TUBBS

The Wren Society : Volumes vii and viii. Oxford : University Press.



[*From* The Wren Society, Volume viii.

Site plan of Sir Charles Barry's design for the concentration of Government Offices in Whitehall in 1859. It shows in advance much that has been very imperfectly realized since. It will be noticed that the doubling of the Banqueting House, proposed by Sir Christopher Wren, is shown, but at the northern instead of the southern end, the new centre being an open portico across a new bridge road. Dotted lines show the old river banks on both sides as then existing.

CHINA ARCHITECTS' AND BUILDERS' COMPENDIUM

IN the preface to the *China Architects' and Builders' Compendium for 1931*, which has now reached its seventh year of publication, we are told that the exceptional activity in building in China which characterized 1929-30 has been continued into this year, despite the increased cost of building materials resultant from the new tariff regulations and the augmented wages being paid because of the currency depreciation. The building trades and realty operations have been practically the only lines which have not shared the current trade depression.

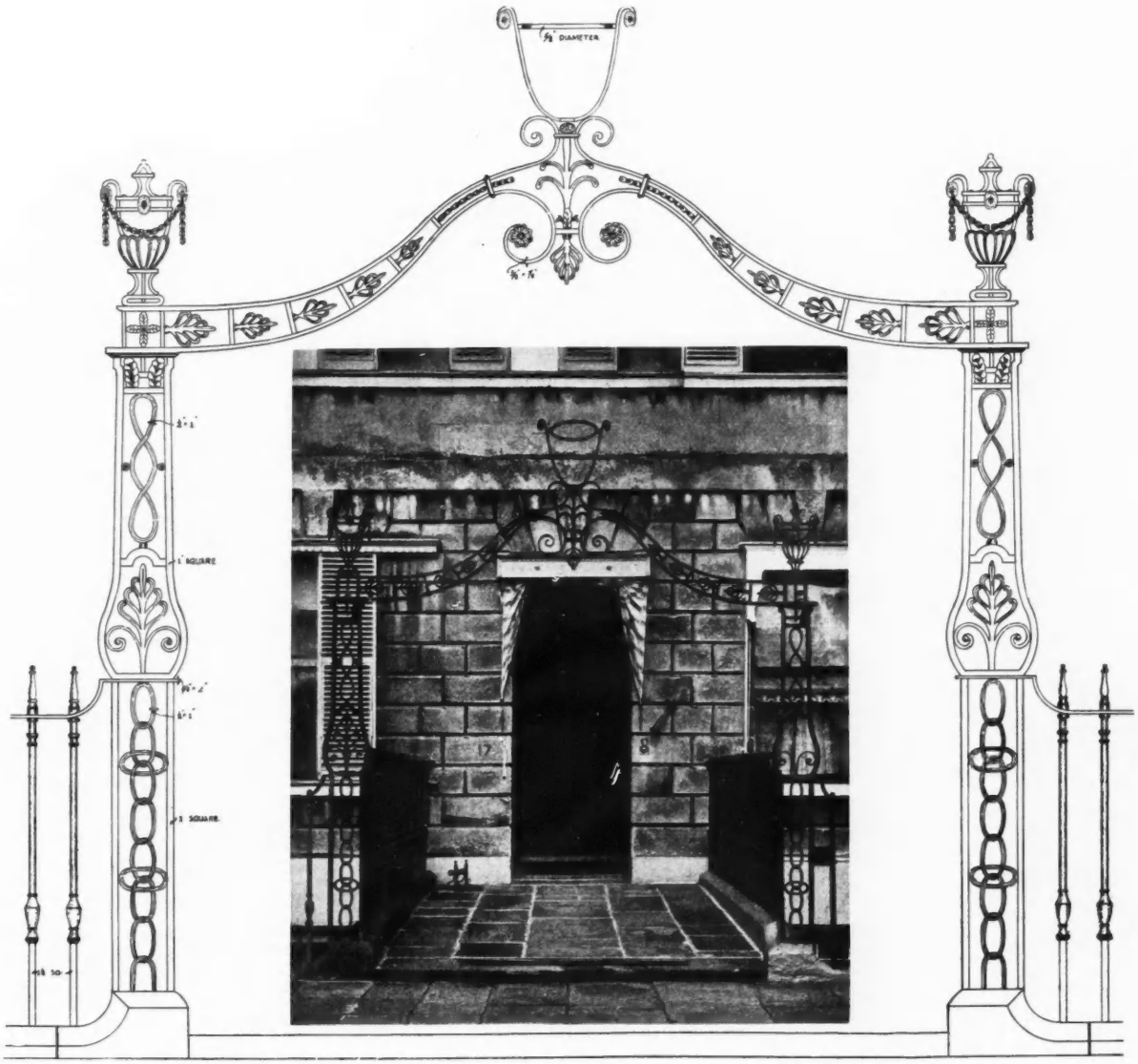
Buildings in the Settlements tend to continue their aspiring trend, and with land appreciating so rapidly in value it is expected that the number of stories will increase so far as considerations of safety permit. Although the difficulties surrounding the opening of roads outside the Settlements persist, building of detached houses is rapidly developing on such tracts of ground as are available.

China, like other countries throughout the world, is still building new theatres and cinemas. The editors of the *Compendium*, Messrs. J. T. W. Brooke and R. W. Davis, point out that there is apparently an inexhaustible audience amongst the Chinese. The new cinemas are being constructed upon the best modern principles with regard to projection and audition, as well as comfort.

The book, like its predecessors, is divided into four sections; the first contains general information, a list of land, property and building; the second, technical information, cost and price lists; the third, a directory of architects; and the last a catalogue of builders' materials, etc. At the end is a comprehensive index. W. K.

The China Architects' and Builders' Compendium for 1931. Edited by J. T. W. Brooke, A.R.I.B.A., and R. W. Davis. North-China Daily News and Herald, Limited. Price 8s. net.

XVIII CENTVRY LAMP STANDARD LANSDOWN CRESCENT. BATH. ENGLAND.



SCALE

The lamp standard here illustrated by a photograph and scale drawing, fronts No. 17 Lansdown Crescent, Bath, and is probably coeval with the building of the Crescent, which was designed by John Palmer, who superseded Baldwin, the city architect, in 1794.

The two fuchsia sprays and the rosette immediately below the lamp holder are of bronze, and the other ornaments are of cast iron, and not of lead, as was originally thought. The supports to the lamp ring are of iron, finely swaged.

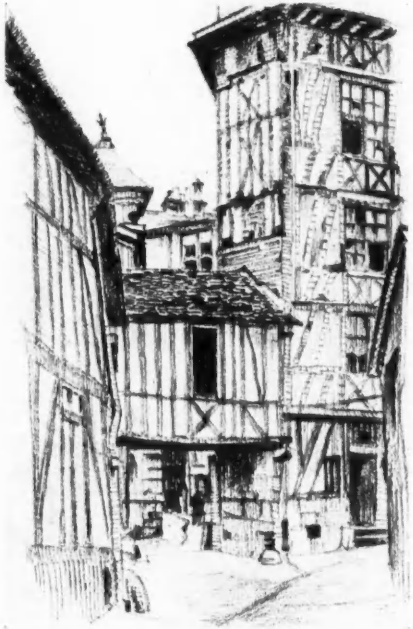
A note on the drawing suggested that the ornaments were cast from the same patterns as the plaster ornaments within the houses, but this opinion has been questioned in favour of patterns made for the purpose.

The lamp itself was composed of a glass bowl, which hung by a lip from the ring, and was covered by a metal dome. The bowl being filled with oil, the light was given by floating wicks. The standards throughout the Crescent are in a bad state of repair, with many of their ornaments missing. To preserve an example of this fine ironwork, the owner is having this lamp standard repaired by a local smith, whose business is in direct descent from one Edward Tuck, whose smithy is known to have been founded prior to 1740.

T. F.

By Alan Sherwin.]
Fordham,

(Crayon: 8¼″×6″)
Cambridgeshire.



By Alfred Womersley.]
Caudebec.
(Pencil: 5¼″×6¼″)

HEREWITH are exhibited more of the drawings submitted in the first of the Holiday Sketches Competition. The second Competition — that for August — has now closed, and once more the task of adjudication is in hand. The award will be announced in THE JOURNAL for September 9, when winning subjects will also be reproduced. There is yet a third, and last, chance for intending competitors; September 15 is the sending-in day for the final competition. Motto labels, the use of which is obligatory, are reproduced on page 291.

By O. H. Bedford.]
At Rouen.
(Charcoal: 6½″×10″)

[*By Reginald C. Chapman.*
At Bucks Mill,

[*By Alfred Womersley.*
Falaise.
(Conté: 6¼″×7⅜″)

[*By O. H. Bedford.*
At Rouen.
(Charcoal: 8″×12¼″)

(Watercolour: 9¼″×10½″)
North Devon.

Chapman.
At Bucks Mill,

North Devon.

By G. McKinlay.] (Pencil: 15″×9½″)

The Old Palace, Richmond

By Norman Davey.] (Pencil: 7½″×5½″)

West Street, Corfe Castle.

By Frank M. Coombs.] (Watercolour: 10″×7½″)

St. Swithun's Bridge, Winchester.

By Vivian J. Cummings.] (Watercolour: 14″×9″)

Farmyard at Pagham, near Chichester.

NORWICH: FROM A STRANGER'S STANDPOINT

BY ROBERT ATKINSON

We print below extracts from an address entitled "Norwich: From a Stranger's Standpoint," read by Mr. Robert Atkinson, F.R.I.B.A., at the annual meeting of the Norwich Publicity Association. The author descends upon Norwich as a stranger with no previous knowledge of its history, and, aided by an ordnance map and his own expert knowledge, he tells of his deductions and discoveries. Much of the extracts are devoted to the city's ecclesiastical buildings.

NORWICH is redolent of the Middle Ages. Every lane is peopled with shadows. How one can see the crowds run towards the markets; how they chaffer in the streets; every travelling bear is an event.

Every dark passage has its church bridging it in some way, either by its porch, or its chancel, or its tower; and each archway has its niche for the patron saint whose lamp was maintained alight day and night.

East Anglia is quite a kingdom in itself and is so different from the rest of England, so detached, so very Flemish, and its churches are only rivalled by those of Somerset. No other district ever produced a "School," with its Crome and Cotman; and with Gainsborough and Constable so closely associated with it. As for the churches, Suffolk has five outstanding examples at Blythburgh, Lavenham, Long Melford, Southwold and Bury, but in Norwich alone there are five gems of the purest water in St. Peter Mancroft, St. Gregory's, St. Giles', St. Stephen's and St. Andrew's—with thirty others in reserve. The cartwheel plan of the Norfolk roads, fourteen or fifteen at least centring upon Norwich, denotes an old and populous concentration. No other city so dominates its county, proving that Norwich, although not always the cathedral city, must at all times have been the largest town. Its Saxon and Norman importance may be gauged by its 1,300 burgesses, which, on the basis of 100 families to a parish, admits of thirteen churches. But its greatest period of prosperity began about 1400 and lasted till 1600 or 1650. The Flemish weavers, arriving about the middle of the fourteenth century, laid the foundations of its wonderful wealth during the fifteenth and sixteenth centuries. Even to-day's impression is overpoweringly mediæval, more so than either York, Chester or Bristol.

The Mediæval Buildings

The immense mass of mediæval buildings embedded everywhere in the street blocks of Norwich is surprising. Many were refronted at later dates, but this really is only skin deep. The merchants' houses alone—Strangers' Hall, Suckling House, Curat's House and the Bridewell, with probably others still to be disinterred, are worth a pilgrimage. Back's Elizabethan Wine Room, by the way, shows embattled panelling of probably one hundred years earlier. There are many fifteenth-century houses, Elizabethan specimens galore, and but few eighteenth-century types, though such as there are—St.

Photographed by]

Elm Hill, Norwich.

[*William Buston.*

Cow Hill and St. Giles' Church, Norwich.

Catherine's Close, with its round porch, the old Assembly Rooms now the Girls' High School, the two chapels, the Old Meeting House and the Octagon, are all beautiful and anywhere else than in Norwich would be notable.

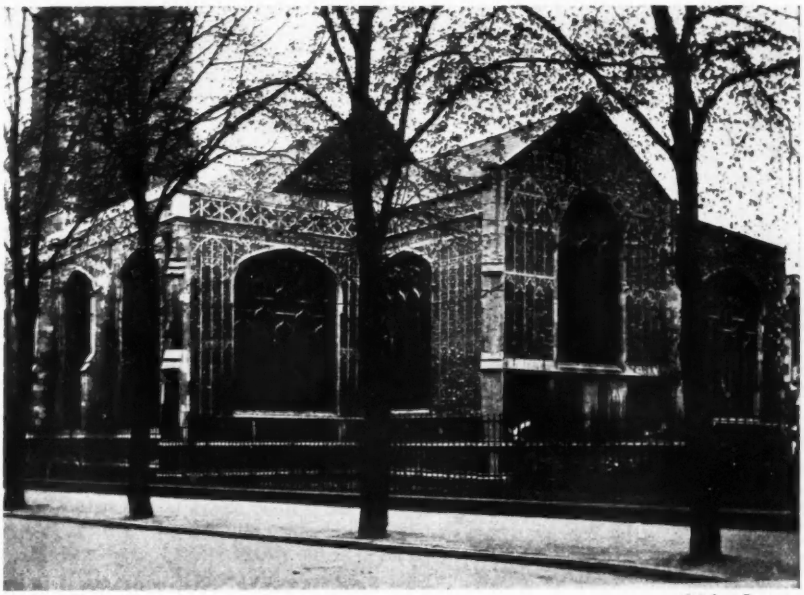
The Centre of the Old Saxon City

There is a site marked "church" in Upper King Street, and another (now Catholic Apostolic) in the flesh in Queen Street, just labelled "church" on the ordnance map. This latter is part of the bunch of churches near Tombland, once the centre of the old Saxon city.

Hereabouts the churches are placed higgledy-piggledy and the houses are squeezed closer together, marking probably the centre of the Saxon town and producing delightful views across Tombland, the original market place, from which, as in other large towns, several markets for various purposes sprang.

In Saxon times the walls were not yet built and the houses, of flint and thatch or with sun-dried clay walls, were strung loosely along the one-and-a-quarter miles of rising ground looking over the meadows and river. Into this barged, as it were, the Normans, seeking a safe home for their lords, spiritual and temporal. They built the castle on its ready-made knob and probably made Ber Street as a safe way in to avoid the Saxon streets on a dark night. But as the best situations were already fully occupied, they were forced to place their cathedral in the meadows, almost below flood level but on the highest ground still available within the town. Thus the first great era of Norwich began, the church and castle were built, many monasteries settled themselves and many more churches were founded. Practically the whole low-lying area on the bend of the river was covered by clerical and monastic buildings and gardens, and this area was fortified with walls and gates probably before the town itself was walled, as the citizens had not yet acquired valuables worth protecting.

The ordnance map tells all about the churches. The little ones, with rounded tower and narrow plans, are Norman, the wide square ones, with many buttresses, are perpendicular or fifteenth century; others show irregular additions and are of various dates. No little one is off the old street, except perhaps St. Mary-at-Coslany and St. Saviour. The square ones are all over the city, clustering thickest where the population is, and thinner on the outskirts, showing a gradual expansion right up to the Reformation. When the walls were built, they made a long curve from river to river on both sides; on the south just enclosing the extreme ends of the Saxon town but bulging out to secure the highest ridges of ground at St. John de Sepulchre so as not to be overlooked, and to St. Giles's Gates and so down to the river, thus enclosing incidentally a good open space for market gardens and grazing ground for cattle in case of defence. North of the river, the bulge of walls does not coincide with the south, showing how the buildings here, which had overrun the ground before the walls were built, had to be included. Of these walls much remains, but of the many gates nothing substantial is left us.



Photographed by] [*Walter Buston.*

St. Michael-at-Coslany Church, Norwich.

Venturing into an Ancient Church

To enter for the first time an ancient church is a great adventure. To the knowing its secrets are revealed and one is stunned by the revelation of what remains in Norwich. I am always hunting out the secrets of these churches and gloating over them, and I am letting you into my discoveries. Sometimes one goes into a church to find that some restorer of a hundred years ago has left nothing of value. Norwich, fortunately, escaped the "restoration" fever, so every interior brings something new and interesting. Not least amongst its treasures are fifty or sixty doors of the fourteenth and fifteenth centuries, and I hardly think you would find half a dozen in any other county. What is more, the ironwork, hinges and locks are often complete. The outer doorway to the Strangers' Hall, with its carved lion and unicorn and pierced fanlight, is a thing any other city would make a particular feature of. Were it at South Kensington it would be almost the lion of its section. Last year (1930) at South Kensington there was arranged a collection of mediæval church fittings from the whole kingdom. I do believe Norwich possesses as many, if not more, of these fittings than there were in the whole of that collection.

Notes on some of the Churches

St. Michael-at-Plea possesses a beautiful porch, with its original traceried fifteenth-century doors second only to those at St. Michael-at-Coslany, and a lovely Jacobean font-cover, of which there are many similar in Norwich.

St. Gregory's Church is really wonderful—as good as anything in Norwich. In many ways it is as good as St. Peter Mancroft. It has a superb tower, and a pair of porches that I do not think you could match elsewhere; above all, a great rarity is the sanctuary knocker of the fourteenth century on the vestry door—there are probably six others existing. I could have put it in my pocket at the time of my visit, but I understand it has now been securely fastened. The church has also a ringers' gallery, a Jacobean font-cover of unusual pattern, a lectern of 1486, old sedilia and part of a screen. The fine clock, as is not unusual in Norwich churches, is not working.

St. Margaret's Church made my visit to Norwich a red-letter day indeed, for there I found something very remarkable—a wonderful chest of the late-fourteenth century, similar to one illustrated from Litcham Church in M. R. James's recent book on *Suffolk and Norfolk* (p. 21). Upon it were several hymn-books, hats and coats. There is only one other chest anything like it that I can remember, and that is at Faversham, in Kent. It was included

in the South Kensington exhibition, but the Norwich one is better because it has its original quatrefoil lid. Here also is a fine Jacobean chair and the original Jacobean altar table, now a receptacle for hymn-books.

St. Giles's Church

Wandering up Pottergate and Cow Hill, I came quite suddenly and unexpectedly upon the wonderful tower of St. Giles's Church, the simplest and grandest tower in Norwich. From the bottom of Cow Hill, looking up between the two rows of old houses, is a view to delight any painter's heart. This recalls another asset of Norwich—a lovely atmosphere. The perspective of its streets in every direction is paintable and beautiful, and especially lends itself to etchings.

St. Michael-at-Coslany exhibits the finest flint work in England. It also possesses the best west door in Norwich, in fact, one of the finest in the country, and a fine seventeenth-century altar table and a brass matrix from which the brass is missing; but why, by the way, are the authorities allowed to nail income-tax notices on church doors ?

Fine Monuments in Overwhelming Numbers

In all the churches there are fine monuments in overwhelming numbers, of which a proper survey is necessary. There can be no general idea of what wealth of effort and money has been lavished on the beautiful things in Norwich. To exploit them properly would open up an enormous field of publicity. Every reference to York mentions what a wonderful mediæval city it is, how remarkable its churches and its walls. The same remark applies to Chester. Yet Norwich is larger than either of these cities, with twice or three times the number of churches, and the fittings are certainly unique.

Publicity on Proper Lines

Publicity on proper lines could be got by exploiting the lesser monuments more fully; by publishing very small handy folders or guides to each particular building and not so much a general guide to the city. Postcards, as such, are dead : their popularity has waned enormously. Small folders, with a plan of the church, or whatever the monument is, with two or three of the best photographs, and a few details sufficient to occupy the ordinary visitor a few minutes, are all that is needed. The whole collection might be put together to form a larger volume. Some of the churches now derelict could be used during the summer to house interesting collections of furniture from the churches; another year, vestments and documents might be shown, and a continuous public interest could thus be maintained. Most of the old churches and old inns are well kept up and well restored. I realize the difficulty of preserving or even of restoring everything, because the return on the money spent must be economic, and Norwich possesses a square mile of beautiful buildings.

LAW REPORTS

ALLEGED NUISANCE FROM KENNELS

De Lengerke v. *Berg and others. Chancery Division. Before Mr. Justice Bennett*

THIS was an action by Mr. Geo. Ed. de Lengerke, against Mr. W. H. Berg and others, for an injunction restraining them from keeping or conducting greyhound kennels at Motspur Park, New Malden, Surrey, in such a manner as to cause a nuisance to the plaintiff and the other occupiers of his house known as the Old Farm House, which adjoined.

Mr. Archer, K.C., for plaintiff, said the question at issue was a very simple one, viz., whether the defendants, who were carrying on the business of kennel proprietors, were conducting that business in such a manner as to cause a nuisance from the noise of the dogs kept by them, thus preventing the reasonable occupation of the plaintiff's house. Plaintiff purchased his property in 1929, and at that time the adjoining stables, which did not form part of the plaintiff's property, were unoccupied. In 1931 plaintiff went on a trip to America and servants were in charge of the house. In the April, dogs were placed in the stable by the defendants, who used them as kennels. At first there was no trouble, but in the May, when the plaintiff and his family had returned, their sleep was seriously interfered with by the noise of the dogs, numbering from thirty to fifty.

Plaintiff gave evidence and said the noise of the barking and whining was practically continuous.

Plaintiff's wife and other witnesses supported his case.

For the defence, Mr. R. J. K. Netcott, one of the defendants, gave evidence, and said he had for years been a licensed trainer. They had never had more than forty dogs on the premises. Since the complaints had been made he had often visited the premises at different hours of the night and he had heard no barking, whining or howling. The dogs might have been noisy on the night of the earthquake, but he had not noticed any noise from them since. He had heard the defendant's terrier barking at night.

A number of witnesses were called who gave evidence that they never heard the greyhounds barking or whining or howling at night, and a veterinary surgeon said a properly trained greyhound did not make any noise at all.

His lordship, in giving judgment, said there was a great conflict of evidence, but on the whole he saw no reason for disbelieving the evidence given by the plaintiff and his witnesses. Much of the evidence given on behalf of the defendants did not cover the whole of the period in question, and it was quite possible that so far as it went it was accurate evidence. Under the circumstances the plaintiff had established his case and he was entitled to the injunction he sought, and defendants must pay the costs of the action.

LIABILITY FOR A COLLAPSED WALL

Chessum and others v. *Links. King's Bench Division. Before Mr. Justice Charles*

This was an action by the trustees of the late Mr. J. W. Chessum against Mr. J. G. Links, of Pond Street, Hampstead, to recover damages in respect of a wall.

Mr. Cyril Binney, for the plaintiff, said the action arose over a boundary wall of the garden which separated the properties of the late Mr. Chessum and the defendant at Pond Street. It was a substantial wall, some 9 ft. high. The land on the defendant's side was higher up the brickwork than a pathway which was on the plaintiffs' side of the wall. There were a number of poplar trees on the defendant's side of the wall, and the plaintiffs' case was that the roots of the trees had grown through the wall and had caused it to collapse. Under these circumstances they claimed damages and also sought an order that the defendant should remove some of the trees which were in close proximity to the wall.

On behalf of the plaintiffs, Mr. A. H. Corbell, a surveyor, of Windsor House, Victoria Street, S.W., was called. He admitted that the wall was old, though in his view it was not weak. In his opinion it was possible that the trees swayed in the wind, and their movement would affect the roots and injure the stability of the wall. Witness also mentioned that there was ivy on the wall on the defendant's side.

Mr. L. H. Gluckstein, for the defence, said his case was that the wall collapsed in a gale which raged in December, 1929, owing to the fact that it was decrepit and out of repair. Under these circumstances the defendant disclaimed responsibility for what was an Act of God.

Mr. S. G. Ramsey, an architect, now of Berkhamsted, said at one time he owned the defendant's property, and in 1928 he informed the late Mr. Chessum that though the wall was not a good one, if it were attended to it would probably enjoy a long life. Later he

noticed that it began to bulge, and though he suggested strengthening it, nothing was done.

His lordship, in giving judgment, said he came to the conclusion that the plaintiffs had failed to establish that the trees, either by their roots or through swaying in the wind, had caused the collapse of the wall. In his opinion the wall was old and bulging, and soggy with moisture. It had been badly maintained, and he formed the conclusion that the high wind of the gale blew it over. Under these circumstances he gave judgment for the defendant with costs.

COMPETITIONS OPEN

August 27.—Sending-in day. Proposed all-Scottish House for the Ideal Home Exhibition. Limited to architects practising in Scotland or of Scottish birth. Assessor: John Watson, A.R.S.A., F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from *The Daily Mail*.

September 5.—Proposed extension of the Town Hall, Hackney, for the Hackney Borough Council. Architects are invited to submit their names and brief particulars of their experiences. The competition will be limited to six architects to be selected from the applicants. Assessor: Professor S. D. Adshead, F.R.I.B.A. Premiums: £250, £150 and £100. The authors of the three unpremiated designs will receive a payment of £50 each. Applications should be submitted to R. H. R. Tee, LL.D., Town Clerk, Town Hall, Hackney, E.8, by September 5 next.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 1. 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich.

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

SOCIETIES AND INSTITUTIONS

DORMAN LONG TRAVELLING SCHOLARSHIP COMPETITION

The result of the Dorman Long travelling scholarship competition (value £300), awarded with the object of encouraging and developing steelwork construction in Great Britain, has been announced as follows.

First: E. W. Bentley, of 81 Cholmondeley Road, Pendleton, Manchester (winner of scholarship and gold medal).

Second: D. A. Godfrey, of 15 Western Circle, Burnage, Manchester (silver medal).

Third: G. B. Martin, of 13 Beech Road, Chorlton - cum - Hardy, Manchester (bronze medal).

DORSET SOCIETY OF ARCHITECTS' OUTING

The third annual excursion of the Wilts and Dorset Society of Architects took place recently. About twenty-five members and friends met in the morning at Sandford Orcas Manor, by the courtesy of Sir Hubert Medlycott who, with Lady Medlycott, conducted the party over the church and Manor House, and gave a most interesting talk on the history of the house and its owners. The next place visited was Trent, followed by Church Farm and the Manor House, which provided special historical interest as being the hiding place of Charles II after the Battle of Worcester.

Luncheon was partaken of at the Woolmington Hotel, Sherborne. The President (Mr. C. W. Pike, F.R.I.B.A., of Dorchester) presided.

The journey was then continued through delightful scenery to Bradford Abbas, where a brief halt was made to see the church, and then by way of Yetminster, Ryme, and Evershot to Mapperton.

THE ARCHITECTS' DIARY

SATURDAY, AUGUST 29
Sunrise, 6.5 a.m. Sunset, 7.55 p.m.
ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1 Tour to Vienna, visiting Munich, Salzburg, Linz, Budapest, Zurich and Lucerne. Return, September 13. Full particulars may be obtained from the Secretary.

TUESDAY, SEPTEMBER 1
INTERNATIONAL ILLUMINATION CONGRESS. Official Luncheon to be held at the Savoy Hotel, London. 12.15 for 12.45 p.m. **12.45 p.m.**

FRIDAY, SEPTEMBER 4
INTERNATIONAL ILLUMINATION CONGRESS. At Glasgow. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Organization for the Development of Electric Lighting," by C. A. Atherton; "Progress and Teaching of Illumination in Italy," by C. Clerici; "Lighting Progress in South America," by A. M. Baidaff. Section 3: "The Provision of Adequate Daylight in Building Regulations," by P. J. Waldram; "Daylight Illumination and Town Planning," by C. G. Möller; "Visual Performance at Various Levels of Daylight Illumination," by K. Y. Yang; "Daylight Illumination of Art Galleries with Overhead Lighting," by T. Hirayama. Afternoon Session, 2.30 p.m. Section 1: "Home Lighting," by C. Haslett and N. E. Miller. Section 3: "Photo-Electric Measurements of Daylight Illumination by the Use of a Model Room," by Z. Yamauti and K. Hisano; "Mathematical and Graphical Determination of Direct Daylight Factors," by A. C. Stevenson; "Prediction of Natural Illumination in Interiors and on Walls of Buildings," by H. H. Higbie and A. D. Moore. **10 a.m.**

SATURDAY, SEPTEMBER 5
Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

MONDAY, SEPTEMBER 7
SANITARY INSPECTORS' ASSOCIATION. Annual Conference to be held at Bridlington. Until September 12.
INTERNATIONAL ILLUMINATION CONGRESS. At Edinburgh. Following are some of the papers to be read. Morning Session, 9.30 a.m. Section 1: "The Lighting of Seaside Resorts," by A. P. Allan and J. M. Campbell; "Mason Experiments in Street Lighting," by W. S. Stiles; "Modern Public Lighting by Electricity," by W. J. Jeffery. Afternoon Session, 2 p.m. Section 1: "The British Standard Specification for Street Lighting," by C. C. Paterson. **10 a.m.**

THURSDAY, SEPTEMBER 10
INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2: "Architectural Lighting," by L. Kalff; "Engineering Aspects of Architectural Lighting," by W. J. Jones. **10 a.m.**
SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 16.

FRIDAY, SEPTEMBER 11
INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. **10 a.m.**
ARCHITECTURAL ASSOCIATION. Annual Excursion: to Austria. The programme will include six days in Vienna, followed by a six days' motor coach tour through Austria, returning to London on September 26.

SATURDAY, SEPTEMBER 12
Sunrise, 6.28 a.m. Sunset, 7.24 p.m.
ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

TUESDAY, SEPTEMBER 15
Closing date of THE ARCHITECTS' JOURNAL September Holiday Sketches Competition.

WEDNESDAY, SEPTEMBER 16
INSTITUTION OF STRUCTURAL ENGINEERS. Visit to the Shipping, Engineering and Machinery Exhibition at Olympia.
INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Manchester and District Branch. Visit to the Wardle (Watergrove) Reservoir.

FRIDAY, SEPTEMBER 18
NATIONAL SMOKE ABATEMENT SOCIETY. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19
Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

MONDAY, SEPTEMBER 21
INTERNATIONAL ILLUMINATION CONGRESS. Reception of the delegates at the Royal Institution, London. 3 to 4.30 p.m. **3 p.m.**

TUESDAY, SEPTEMBER 22
INTERNATIONAL ILLUMINATION CONGRESS. Conference of the Institution of Electrical Engineers, at the Kingsway Hall, W.C. 10.30 a.m. Conversaziones at the Royal Institution and the Albert Hall. 8 p.m. **10.30 a.m.**

TRADE NOTES

The Leyland and Birmingham Rubber Co., Ltd., have recently issued a new catalogue of Leyland rubber tiling and flooring. It consists of sixteen pages, thirteen of which form plates showing the many colours and designs in which the tiling and flooring may be obtained. It should be noted that two types of rubber floors are manufactured by the firm, one under the name of Flooring, and the other Tiling. The flooring is manufactured in long lengths, supplied with or without separate borders and in two thicknesses, whereas the tiling is supplied in tiles or panels and laid on the site, to form the design. In the tiling, five thicknesses are available. The illustrations show a big variety of tiling and flooring, in self-colours and marbles in two, three, four, five and six colours. Even then the designs are not meant to be taken as standard, but merely as suggestions. While adopting the patterns illustrated, any colours may be used, or, again, any design may be completed, the colours or marble shades being specified from the list of colours given in the catalogue. Thus designs to suit any specific area can be prepared.

*

A new six-ply waterproof building paper composed of bitumen and sisal fibres encased within sheets of tough waterproof kraft paper, has been marketed under the name of Sisalkraft. It is claimed to be endowed with remarkable strength and stoutness, and to be tough, air-tight, strong, waterproof and permanent. Sisalkraft has been devised for a multiplicity of uses, such as sheathing roofs and waterproofing walls, for lining sheds and poultry houses, for covering openings in buildings, for laying under floor boards to prevent creaking, warping or the penetration of draughts or damp, for use as a tarpaulin for protecting temporarily exposed lime, cement or other damageable materials, for covering "green" work during rainy weather, for curing concrete, for covering carpets and furniture during redecorations, and for 101 varied services throughout the year. It is manufactured in rolls in six widths, ranging from 36 ins. to 84 ins., and is obtainable from Messrs. J. H. Sankey and Son, Ltd., 7/8 Norfolk Street, Strand, London, W.C.2, who are the sole selling agents in England and Wales. This firm will be pleased to forward samples, prices, merchants' terms and full particulars upon application.

*

A new booklet has recently been issued by the British Challenge Glazing Co., of Marshgate Lane, London, E.15, containing the price-lists of the firm's standard lantern skylights and domes. It is divided into three sections, comprising hipped standard lantern skylights, gable standard lantern skylights (including general information on lantern skylights) and standard domes, respectively. Each section, in addition to the price-lists, contains diagrammatic drawings and full fixing instructions. The firm state that their experience covering the period during which exposed steel had been used for roof skylight work, proved the damage caused by neglect irreparable. They claim that the only suitable metal that does not require periodic attention for this type of work is bronze, whether on sea coast or inland, but in most cases the cost is prohibitive. Nevertheless, they state that bronze should always be used on the sea coast, and they will be pleased to furnish prices when desired. Regarding standard domes, they point out that up to the present the use of glazed domes has been restricted by the cost. Each dome, being specially made, had to bear the full cost of detailing, setting out, templets and glass-bending moulds, etc. As their works include, among others, roof glazing and glass-bending departments, they claim to have exceptional facilities for the manufacture of domes, and by standardizing certain sizes, eliminate many of the costs mentioned above.

*

The Standing Committee appointed by the Board of Trade will hold an inquiry at 11.30 a.m. on Monday, October 12, and at 10.30 a.m. on Tuesday, October 13 (if necessary), as to whether imported iron or steel flush pipes (whether galvanized or not), should be required to bear an indication of origin. The inquiry will be held at the Board of Trade Offices, Great George Street, London, S.W.1. Communications should be addressed to the Secretary, Mr. E. W. Reardon, at that address.

The tower of Eastbourne College, floodlighted by G.E.C. projectors and Osram lamps, during the E.C.A. Conference, held at Eastbourne last June. This College was illuminated in order to call attention to this particular form of lighting, which will figure largely during September next, when the International Congress of Engineers will be holding their first conference in this country for several years. Eastbourne College was fully illustrated and described in THE ARCHITECTS' JOURNAL for June 18, 1930.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue.

Deptford Old Town Library (pages 269-272; and supplement). General contractors, L. & W. Whitehead, Ltd. Sub-contractors: Birmingham Guild, Ltd., bronze tablet; Libraco, Ltd., library fittings; Carter and Aynsley, Ltd., door furniture; Morris Singer Co., wrought-iron railings; Z. D. Berry and Son, heating; Acme Flooring and Paving Co., Ltd., flooring; Crittall Manufacturing Co., Ltd., metal windows; Duncan Watson, Ltd., electric lighting; Holophane, Ltd., electric light fittings; Ragusa Asphalte Paving Co., Ltd., asphalt; Gilbert Seale and Son, Ltd., sculptured heads; Moreland Hayne & Co., Ltd., steelwork; F. J. Barnes, Ltd., Portland stone; Finch & Co., Ltd., sanitary fittings.

Boots shop premises, 9-10 Broadgate, Coventry (pages 273-275). General contractor, E. Harris and Son. Sub-contractors: Val de Travers Paving Co., Ltd., asphalt; Cattybrook Brick Co., bricks; Redpath, Brown & Co., Ltd., structural steel; Shepherd, Tobias & Co., Ltd., glass shop fronts and staircase dadoes; The British Challenge Glazing Co., patent glazing; Haywards, Ltd., steel laylights; Siegwart Fireproof Floor Co., Ltd., patent flooring; Rosser and Russell, Ltd., central heating; Boots Electrical Dept., electric wiring and shop fittings; Ascog, Ltd., electric light fixtures; Empire Stone Co., Ltd., stairtreads; Hoskins and Sewell, Ltd., steel casements and lantern and light tower; W. G. Crotch and Son, fibrous plaster; Birmingham Guild, Ltd., Staybrite balustrades; Carter & Co., Ltd., ceramic mosaic floors; Ruboleum Tile Co., textiles; Waygood-Otis, Ltd., lifts; James Gibbons, Ltd., lift enclosure; Philips Lamps, Ltd., Neon illumination; Marc-Henri and Laverdet, interior decoration.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Surrey Education Committee has obtained sanction to borrow £16,000 for the erection of a council school at Bandon Hill, BEDDINGTON.

The Brentford and Chiswick Education Committee has purchased land in Boston Road, BRENTFORD, for the erection of a junior school.

The Surrey Education Committee has approved plans for the erection of a central school at CHEAM, at a cost of £23,883.

The Surrey C.C. has submitted to the Board of Control a layout plan for the proposed colony for 1,500 mental patients at Botleys Park, CHERTSEY.

The Surrey Education Committee has acquired a site on the Hinchley Wood estate, ESHER, for the erection of a central school.

The Surrey C.C. has purchased a site on the St. Helier estate, MORDEN, for the erection of a school clinic.

The Middlesex C.C. is to prepare a scheme for the provision of maternity accommodation for 160 patients at the NORTH MIDDLESEX county hospital.

The Middlesex Education Committee has purchased land in Chalfont Avenue, WEMBLEY, for the erection of an elementary school.

SOUTHERN COUNTIES

The EASTBOURNE Corporation is seeking sanction to borrow £39,000 for the erection of houses on the Martello and Archery estates.

The FOLKESTONE Corporation is to erect twenty houses on the Hill Road estate.

The HOVE Corporation is to erect 100 houses on the Knoll estate, Old Shoreham Road.

SOUTH-WESTERN COUNTIES

The PAIGNTON U.D.C. is to erect a further twenty-four houses on the Collaton estate, at an estimated cost of £10,320.

Plans passed by the PAIGNTON U.D.C.: Four houses, Winner Hill Road, for Mr. A. Jonas; two houses, Elm Park, for Messrs. Maunder and Sons; ten houses, Marldon Hill, for Mr. D. Peeke; two houses, Marldon Road, for Messrs. Mitchell Bros.; six houses, Cecil Avenue, for Mr. F. Binmore.

MIDLAND COUNTIES

The BIRMINGHAM Corporation has sold a site in Perry Common Road, on the Witton Lodge estate, to the Roman Catholic authorities for the erection of a church.

The Ministry of Health has sanctioned the proposal of the NOTTS. C.C. to erect two villa blocks and a nurses' home at the county mental hospital, at an estimated cost of £32,000.

The Staffordshire Education Committee is to erect two senior schools at SEDGLEY, each for the accommodation of 360 pupils.

The Notts. Education Committee has obtained sanction to borrow £5,600 for the purchase of a site at SOUTH WILFORD, for the West Bridgford county secondary school.

The Notts Education Committee has obtained sanction to borrow £9,000 for the erection of an elementary school at STAPLEFORD.

The STOKE-ON-TRENT Education Committee has obtained six acres of land on the Meir housing estate, for the erection of an elementary school.

The Staffordshire Education Committee is to erect a senior school for 400 pupils at UTTOXETER.

The Notts C.C. has approved plans for the erection of a dispensary and school clinic at WORKSOP.

NORTHERN COUNTIES

The ESTON U.D.C. has approved plans for the erection of 286 houses at the Grangetown Garden Village.

The Lancashire Education Committee is to extend the elementary school in Minor Street, FAILSWORTH, at a cost of £14,878.

The Lancashire Education Committee has acquired a site on the Blundell estate, FORMBY, for the erection of a senior school.

The Durham County Education Committee has purchased a site at HORDEN, for the erection of an elementary school.

Plans passed at HULL: Sixteen houses, Ring Road, for Mr. E. Batty; eight houses, Willerby Road, for Mr. D. Smith; two houses, Willerby Road, for Mr. H. Vickerman; five houses, First Lane, Hessle, for Mrs. L. Schollar; two houses, Fishwick Avenue, Hessle, for Messrs. G. F. Tasker and Sons; two houses, Barrow Lane, Hessle, for Messrs. Nurse and Sons; two houses, Calvert Road, for Mr. F. Bilton; six houses, Silverdale Road, for Mr. W. Garbutt; nine houses, Spring Bank West, for Mr. F. C. Polley; eight houses, Boothferry Road, for Messrs. Moore and Arundel; four houses, Kirk Ella, for Mr. H. Smith; four houses, Goodard Avenue, for Mr. A. Johnson; ten houses, Willerby Carr Lane, for Mr. W. Marsden; two houses, Wolfreton Lane, for Messrs. Markwell, Holmes and Hibbert; seventy-two houses, Hall Road, for Mr. S. H. Wrightson; seventy-one houses, Ring Road, for Messrs. Loveridge and Taylor; thirty-five houses, National Avenue, for Mr. H. Sanderson; eight shops, Endyke Lane, for Messrs. Triggs and Barnett; offices and works, Beverley High Road, for Messrs. William Hay, Ltd.; layout of estate, Beverley High Road, for Hull House Co., Ltd.; sixteen houses, Stephenson Street, for Mr. H. Barnett; six houses, James Rickitt Avenue, for Messrs. R. Finch and Sons; two houses, Cayton Road, for Mr. S. Bays; six houses, Willerby Road, for Mr. R. Cleminshaw; two shops, Endyke Lane, for Mr. J. W. Jordan; club, National Avenue, for Mr. J. Taylor.

The Leeds Education Committee has obtained sanction for a loan of £42,000, for the erection of a council school at MIDDLETON.

Messrs. F. W. Woolworth & Co., Ltd., are to erect premises in Effingham Street, ROTHERHAM.

Plans passed by the ROTHERHAM Corporation: Reconstruction of business premises, College Street, for Messrs. H. Garrett & Co., Ltd.; parish hall, High Street, for Kimberworth Church trustees; rebuilding, business premises, College Street, for Mr. R. H. Gilling; two houses, Doncaster Road, for Mr. J. B. Kesteven.

The Royal Liver Friendly Society is to erect premises at the corner of Islington Street and Chapel Street, SALFORD.

The SALFORD Corporation is to prepare a clearance scheme for the Greengate area.

The Miners' Welfare Committee is to erect pit-head baths at St. Hilda colliery and at Westoe Colliery, SOUTH SHIELDS.

The SOUTH SHIELDS Education Committee is to erect a secondary school for 550 boys on the Harton site.

The WAKEFIELD Corporation has approved the plans of the housing architect for the erection of twenty-three houses for aged couples in Brunswick Street, at a cost of £6,000.

WALES

The Taf Fechan Water Board has approved plans by Mr. W. D. Walters, architect, for the erection of offices in Castle Street, MERTHYR, at a cost of £7,580.

SCOTLAND

The GLASGOW Corporation Housing Director has prepared a plan showing the layout of a housing scheme in the Scotstoun area.

The GLASGOW Corporation is considering plans for the erection of a maternity hospital.

The GLASGOW Corporation is to erect a clinic at the Quarrybrae school.

Motto labels should be pasted on the backs of all sketches submitted and on the sealed envelope containing the competitor's name and address.

Architects' Journal Sketch Club

Holiday Sketches Competition

SEPTEMBER, 1931

MOTTO	NUMBER OF DRAWINGS ENTERED

IMPORTANT:—ENTRIES FOR THIS COMPETITION SHOULD REACH THE EDITOR OF THE ARCHITECTS' JOURNAL, 9 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1, NOT LATER THAN TUESDAY, SEPT. 15, 1931.

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RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENS-FERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKE-FIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . ,,	9 6
¾" ,, ,, . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼ Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
Deal matchings, ¾" . . . ,,	1 15 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1¼" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness .	¼"	⅜"	½"	¾"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas	50
Water . . .	58½	,, water	45
Steam . . .	55	,, steam	40
FITTINGS.			
Gas . . .	57½	Galvanized gas	47½
Water . . .	52½	,, water	42½
Steam . . .	47½	,, steam	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R.	4" s. d.
Shoes	each	2 3 3 3
Anti-splash shoes . . ,,		5 0 8 6
Boots . . . . ,,		3 3 4 6
Bends . . . . ,,		2 9 4 0
,, with access door . ,,		— 6 9
Heads . . . . ,,		4 0 5 0
Swan-necks up to 9" offsets . ,,		4 0 6 3
Plinth bends, 4½" to 6" . ,,		4 0 5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5 6
Stop ends	each	6 7
Angles . . . . ,,		1 7 1 11
Obtuse angles . . . ,,		2 0 2 6
Outlets . . . . ,,		1 9 2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 6
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 3 . ,,		4 0
,, ,, ,, 5 . ,,		5 0
,, ,, ,, 7 . ,,		6 0
,, ,, ,, 15 . ,,		7 6
,, ,, ,, over 15 . ,,		
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . cwt.	2 8 0
Linseed oil . . . gall.	3 3
Boiled oil . . . ,,	4 3
Turpentine . . . ,,	3 8
Patent knotting . . ,,	14 0
Distemper, washable . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . ,,	4 0
Size, double . . firkin	3 0
Copal varnish . . gall.	13 0
Flat varnish . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . ,,	1 15 0
Ready-mixed paint . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . ,, Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . . ,,	1 18 6
,, ,, ,, underpinning . . . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . Y.S.	9

DRAINLAYER

	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,, ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
½″ deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1½″ ,, ,, ,, ,, ... ,,	2 7 6
2″ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
½″ do. . . . . ,,	3 4 0
¾″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1½″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 0
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ½″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns . . . . . Each	9
1½″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . . ,,	3 0
1½″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . Each	2 6
1½″ × 1½″ ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . . ,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters . . . . Per cwt.	1 18 0
Do. in flashings . . . . . ,,	2 0 6
Do. in covering to turrets, etc. . . . . ,,	2 7 6
Do. in soakers . . . . . ,,	1 13 6
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

Lead service pipe and fixing with pipe hooks . . . F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1½″ s. d. 2 8	2″ s. d. 3 8	4″ s. d —
Do. soil pipe and fixing with cast lead tacks . . .	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks . ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 6
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 0
9″ × 3″ ,, ,, ,, ... ,,	1 9 6
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

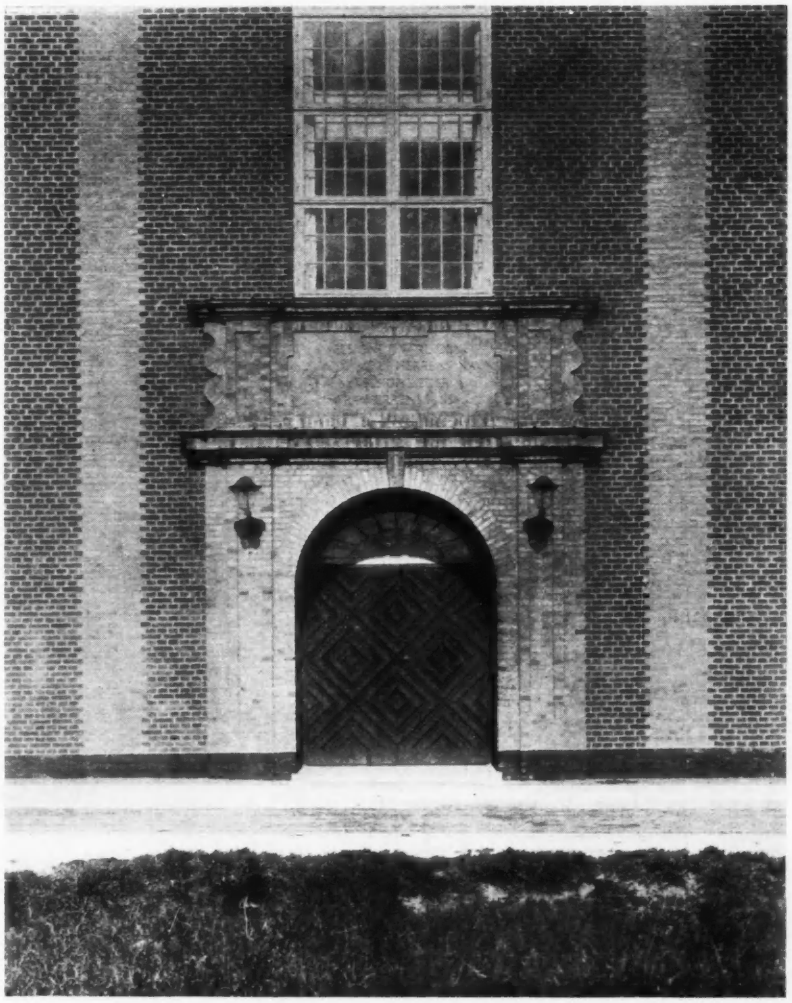
	s. d.
21 oz. sheet glass and glazing with putty . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

THE LINDEVANG CHURCH

THE ARCHITECTS' WORKING DRAWING OF THE ENTRANCE



[*Thomas Harning and Anton Fredericksen, Architects.*

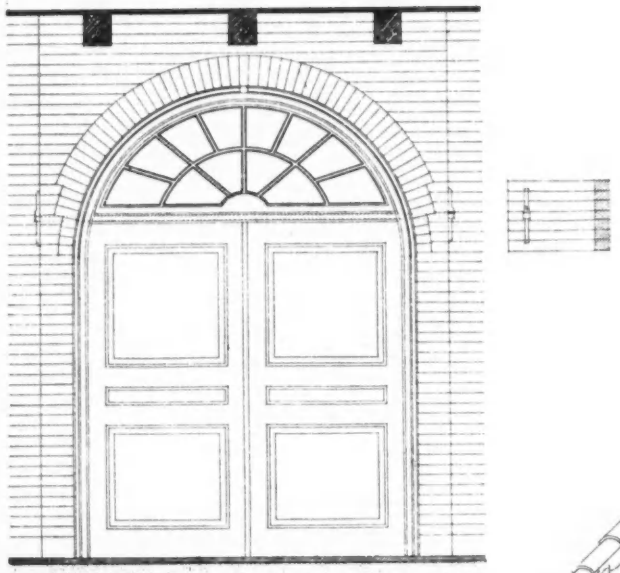
THE MAIN DOORWAY, WITH INSCRIPTION OVER

THE Lindevang church, Denmark, from which the steeple was chosen for illustration in a supplement with the issue of August 12 last, terminates in plain ends, and the main entrance, pictured above and within by means of scale drawings, is the central feature in one of them.

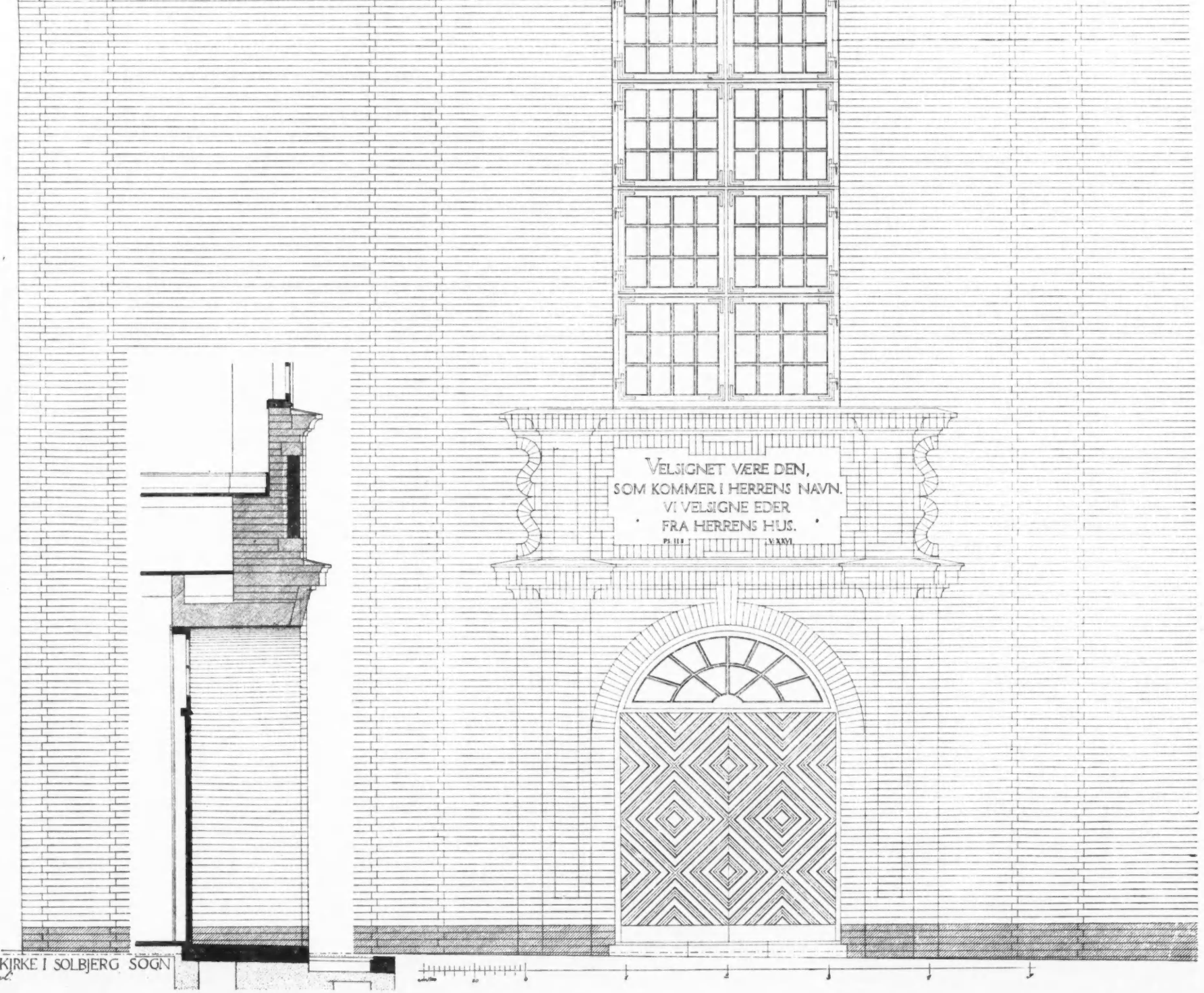
The present photograph indicates very clearly the effect of the black brick plinth and the red brick walls, relieved with their yellow brick vertical stripes. The tablet over the doorway is in limestone, and bears the following inscription :

> Blessed be he that cometh in the name of the Lord.
> We have blessed you out of the house of the Lord.
> (Psalm 118, v. 26.)

The general view of the church is reprinted on the last page of this supplement for purposes of reference.



Inside Elevation of Entrance doors



DEN NYE KIRKE I SOLBJERG SOGN

Kirkens Vestgavl

[*Thomas Harning and Anton Fredericksen, Architects.*

A GENERAL VIEW OF THE CHURCH FROM THE STREET

MODERN READING ROOM FITTINGS

THE ARCHITECTS' DETAIL DRAWINGS FOR DEPTFORD OLD TOWN LIBRARY

[*A. W. S. and K. M. B. Cross, Architects.*

THE LENDING LIBRARY, SHOWING BOOKSTACKS AND ATTENDANT'S DESK

THE large-scale drawings reproduced overleaf include details of the bookstacks in the Lending Library, shown in the above photograph. Views of the Newspaper Room and of the Children's Room, in which occur the newspaper slopes, tables and other fittings, also drawn, will be found in the pages of this issue devoted to an illustrated descriptive article upon Deptford Old Town Library.

These designs are modern in the best sense of the word—not here to be confused with "modernistic"—inasmuch as they represent fittings conceived in the light of experience for specialized needs of the present day. They are carried out in plain waxed oak, the same material being used for all internal doors of the public rooms in the building.

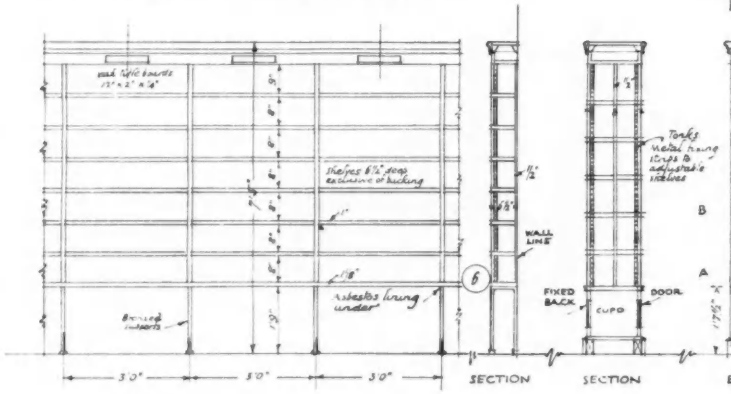
The Lending Library, besides being lined with bookstacks, has six independent stacks in the central floor space.

In the Newspaper Room, sloping reading desks are fitted around three of the walls, and a magazine rack in one corner. Here and in the Children's Room the tables, with their slightly inclined tops, and chairs, occupy the central open spaces of the rooms.

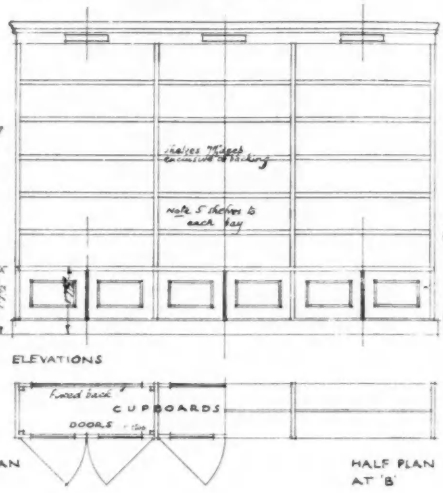
DEPTFORD OLD TOWN LIBRARY

JOINERY DETAILS: ¼" INCH SCALE & HALF FULL SIZE
TABLES & SLOPES: HALF INCH SCALE

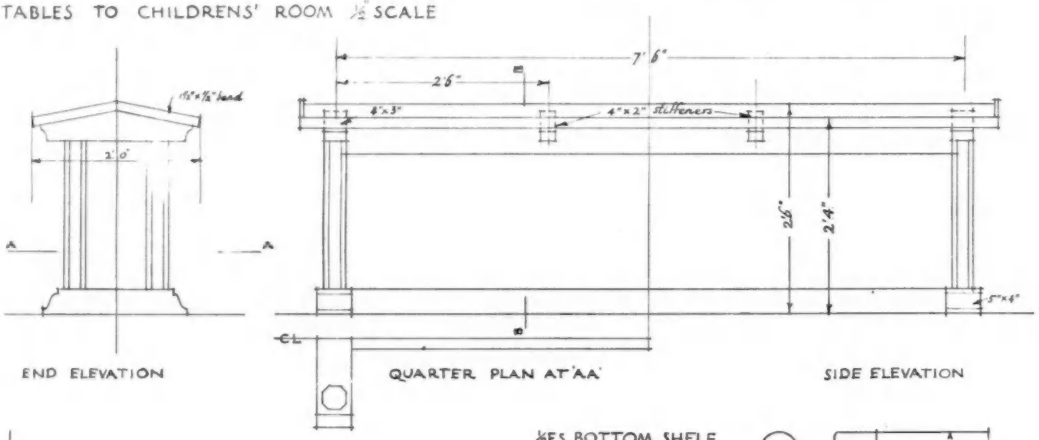
WALL SHELVES TO LENDING LIBRARY

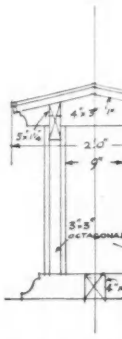


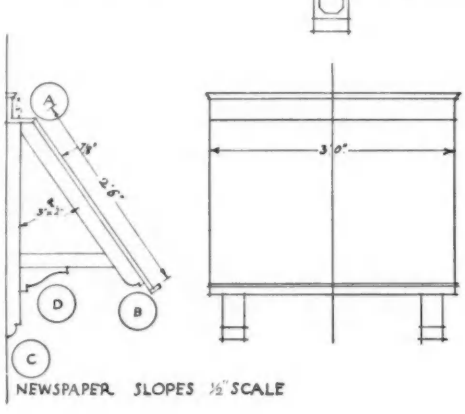
DOUBLE BOOKSHELVES TO LENDING LIBRARY ¼" SCALE



TABLES TO CHILDRENS' ROOM ½" SCALE



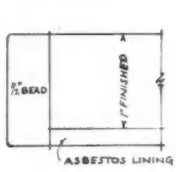


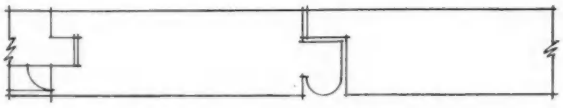


½F.S. BOTTOM SHELF TO WALL SHELVES (6)

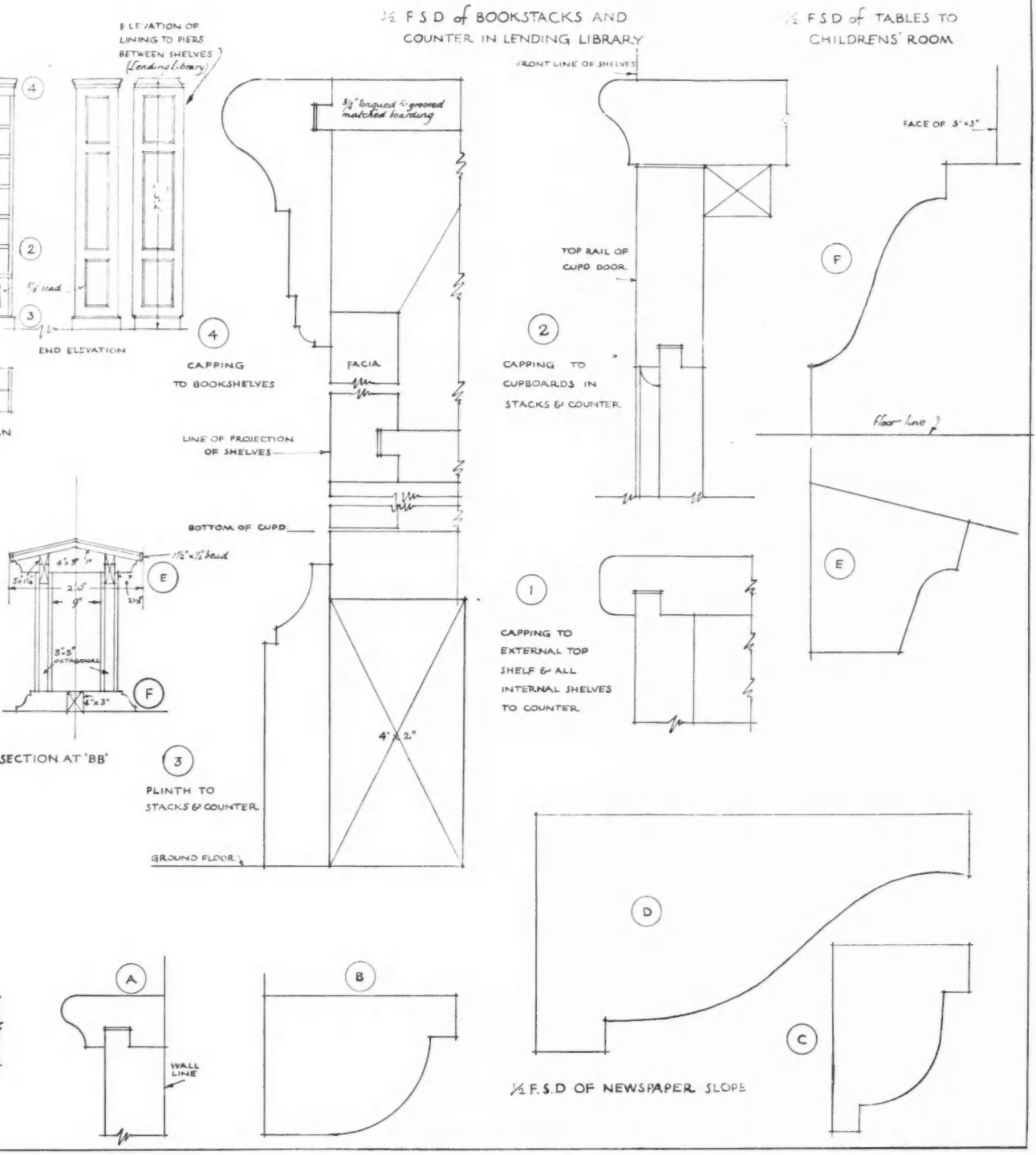
[LENDING LIBRARY & CHILDRENS RM.]

NOTE
BEAD TO RUN ALONG FRONT EDGES OF ALL BOTTOM SHELVES. ASBESTOS LINING ONLY OVER PIPES (see Setting Out Plan)





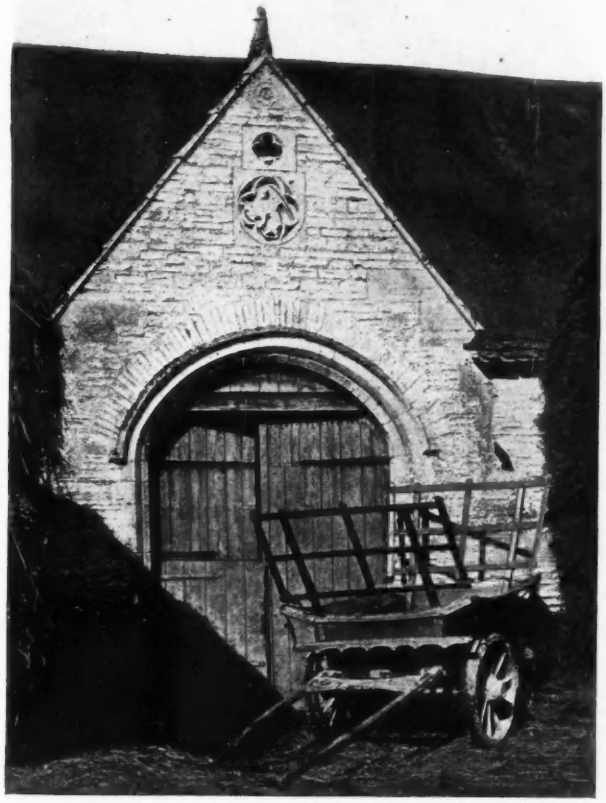
½F.S. of MEETING STYLES TO CUPBOARD DOORS
[LENDING LIBRARY]



[*A. W. S. and K. M. B. Cross, Architects.*

SELECTED PRECEDENTS:

A SERMON ON BARN DOORS



1. *PILTON SOMERSET.*

"IF buildings, when they die and crumble here on earth, rise again in happy immortality, then in their heaven, filled with the goodly buildings of this world, surely barns will hold an honoured place. There they will enshrine celestial treasure, as here they harboured golden grain."

A pretty thought, or, at least, a quaint conceit (borrowed from my very old friend, Mr. Geoffrey Giddings), but, to my mind, going nearer to the depth and root of the matter than all this learned talk of "crucks" and tie-beams, wall-plates and purlins, which swells the space between the covers of our knowledgeable textbooks.

Here are four doors, from ancient barns, wide and tall to let the loaded wains go in, discharge their precious cargo, and come out empty on the other side. Now that is meeting conditions fairly. Every stone is there for a set purpose—the arch-stones above the door, the drip mould to throw the water off, the buttresses to take the thrust, the quoins, the steep pitched roof, the coping-stones protected by their moulded joints—even the emblems of the saints had a practical significance. Now there's "Functionalism" for you—Functionalism in its time and season.

But what is sincere today may be an affectation by tomorrow. Superficial forms are passing things. But in the depths, at the roots, there is something firm remaining—something older than these barns, older even than their stones, and that is the love of truth which takes these barns to heaven.

Today we store our corn in other ways. Rats and mice do not molest it, nor does mould corrupt it. So glory be to our clean white ferro-concrete silos. If we build aright who shall say that that love of truth shall not waft them, too, to heaven?

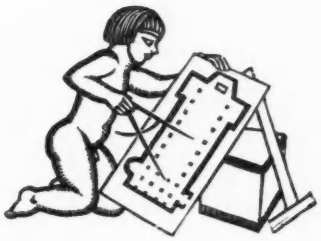
JAMES BURFORD

2. *ABBOTSBURY, DORSET.*

3. *GLASTONBURY, SOMERSET.*

4. *DOULTING, SOMERSET.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, SEPTEMBER 2, 1931

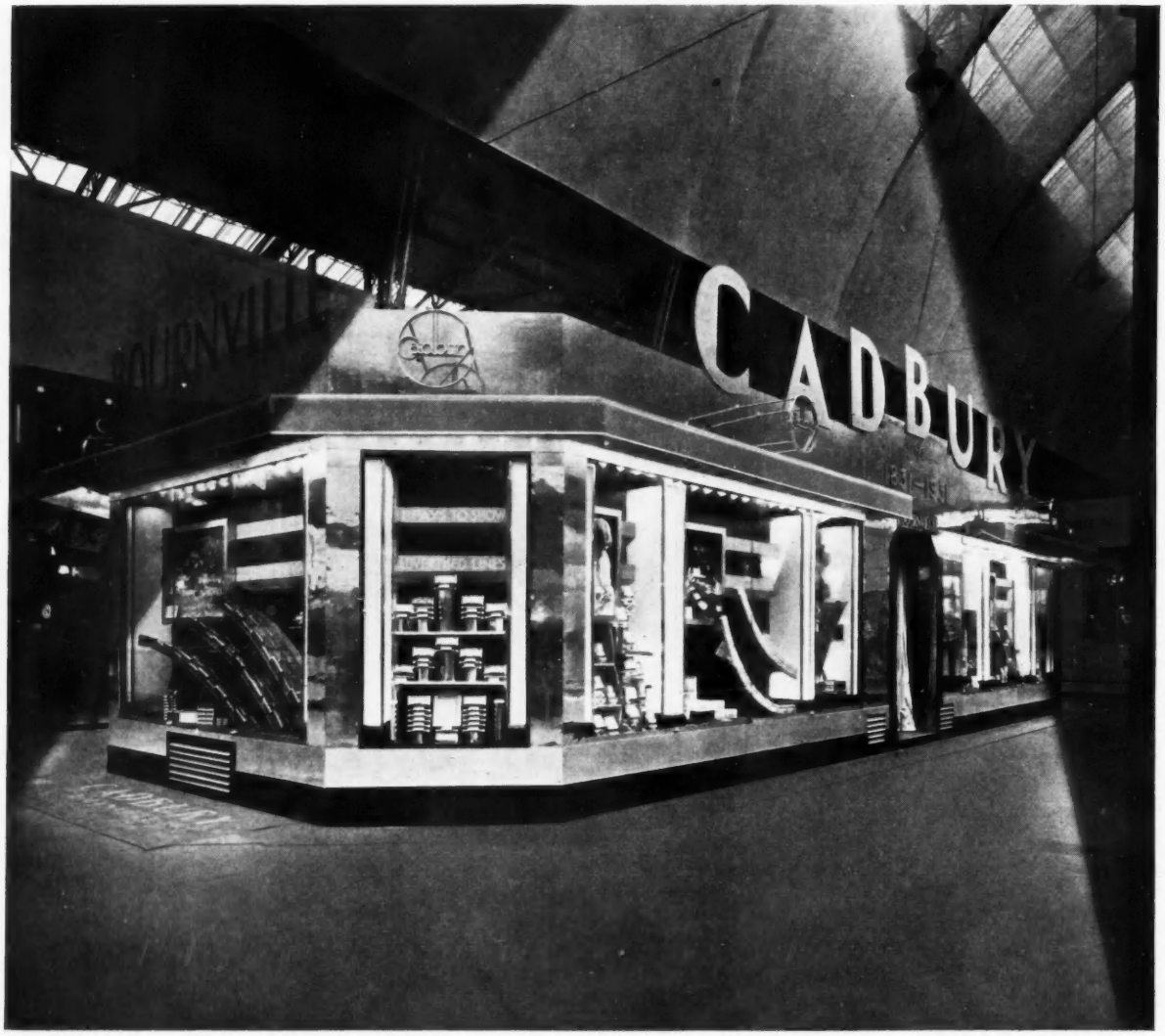
THE CASE OF SOUTHWARK

AT a time when the need for national economy is on everybody's lips, it is but natural that every department of human life, and architecture not least, should be affected by the new-found zeal for curtailing public expenditure. To what extent must the building industries be made to suffer in what is admittedly a good cause? The question appears to be raised in an acute form by the decision of the Southwark Borough Council to postpone all building operations on the proposed new Town Hall and Public Library, which were to cost approximately £155,000. The plans for this building have already been approved, but no definite action has yet been taken to give effect to the scheme. If the zeal for economy takes a similar form in other boroughs, one might well ask where it is going to stop.

In the present age the municipalities of England have, in a large number of instances, shown themselves to possess a new pride in their function and status, and this pride has taken the form of a determination to build for themselves town halls and municipal offices worthy of their civic dignity. It will be acknowledged in times to come that these new town halls will represent one of the finest architectural achievements of the present century. Moreover, if we look at the problem from the purely practical and utilitarian point of view, it must be admitted that the efficiency of municipal administration is still in many instances gravely hampered by badly-arranged offices, providing quite inadequate accommodation. Just as we cannot hope to revive our industries without extensive schemes for re-conditioning our factories, for the same reason the functions of the municipalities cannot be properly performed unless their officials also are housed in buildings exemplifying twentieth-century standards of planning. Therefore, it may be contended that if, in these times of stress, the building industry is to have left to it any function at all, the erection of new and much-needed municipal offices should be the very last activity to be curtailed.

In this connection one may point to the example of Germany and Austria, in which countries large schemes of building for purposes of public utility were embarked upon even at the periods when the national finances stood at their lowest ebb. This action has often been criticized as an unjustifiable extravagance, but it is questionable whether such strictures are just. As an example of far-sighted state and municipal building, one may mention the new Labour Exchange at Kiel, in which city there are at the present moment 27,000 unemployed. Yet the municipality has chosen this time to erect what is probably the most efficient and scientifically-planned labour exchange building in the world. It may scarcely be questioned that this building will pay for itself many times in the increased efficiency in which a necessary social function is discharged.

Again, we have to take into consideration the effect which a general policy of postponing building operations and other public expenditure will have upon the numbers of the unemployed. It will be no national economy if, after reducing the unemployment benefit by 10 per cent., we increase the numbers of the unemployed by 15 per cent. The basic industries of the country must be carried on; and while "luxury" building should certainly be discouraged, a well-planned block of municipal offices should certainly not be considered as coming within this category. We should appeal, therefore, to the Southwark Borough Council to reconsider its decision. Money spent on a good building which is designed to serve the public interest is not wasted.



AN ALUMINIUM-FACED EXHIBITION STAND

Cadbury's stand at the Chocolate and Confectionery Exhibition at Olympia, which has just closed, was designed by Mr. Joseph Emberton.

The stand contains an elaborately-fitted showroom, reached through two principal entrances, placed centrally on the longer sides. Inside and out the stand is lined with aluminium-faced plymax.

A great deal of light was required to throw into prominence the exhibits arranged in showcases round the four sides of the stand. Owing to the great amount of heat generated by the lights placed inside the showcases, it was necessary to arrange for part of the light to be thrown into the showcases from outside. The inverted lighting troughs were, consequently, not a part of the original design.

NEWS & TOPICS

THE SHAKESPEARE THEATRE ONCE AGAIN

NOTHING but good can come of the numerous press controversies over various aspects of architecture, especially when a new building becomes the subject of comment. I read with interest, therefore, the letters recently published in *The Birmingham Post*, in which a number of correspondents have expressed their views for and against the new Shakespeare theatre. Again, it is objected that this building too stridently defies the established tone and character of its architectural environs, and again the defenders of the new design utter their protest against the sentimentalists, who would still make us clothe a modern structure in the sham Romantic dress of half-timber. Yet this is not really the point at issue. Any visitor to Stratford-on-Avon must be aware that the dominant architectural character of the little town is not really mediæval, or even Elizabethan, for many of the streets are lined with charming eighteenth-century façades, and it is with these latter that le Corbusier style appears to clash. However, the problem will not be settled this year or the next, and the main thing is that it should be publicly discussed as often as possible—and without the disputants losing their tempers!

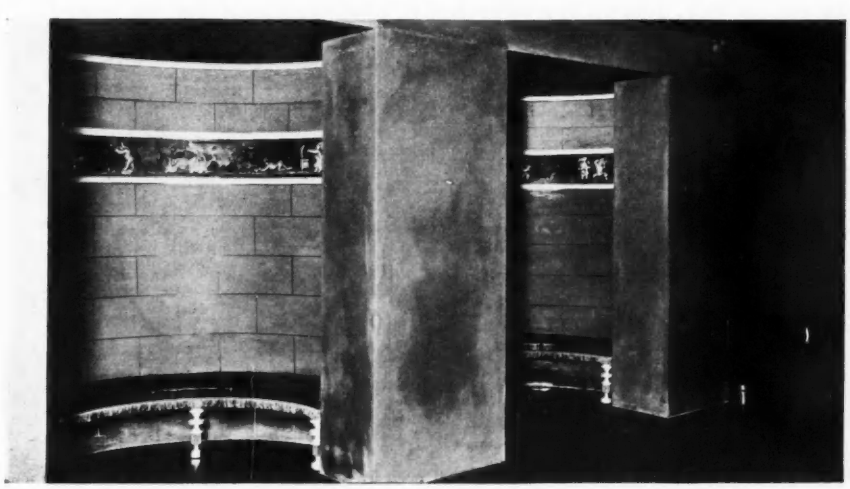
A "TEMPLE OF LABOUR"

It is a far cry from Stratford-on-Avon to Moscow. But there also the "functional" buildings make their appearance, yet probably without raising any protest (or at least any *printed* protest on the part of the "traditionalists"). The latest architectural venture of the stern rulers of Russia is the Temple of Labour, which is to replace the famous Cathedral of the Redeemer. The Cathedral, which was started in 1837 and took forty-six years to build, has an enormous golden dome, which crowns the Moscow skyline in much the same way as the dome of St. Paul's dominates London. Its construction was undertaken by the Czar's Government, in order to commemorate Napoleon's retreat from Russia. Famous painters and sculptors gave of their finest work to embellish this building, which could hold a congregation of 10,000 worshippers. The Cathedral is to be demolished, and the Soviet Government, anxious that an appropriate building should rise in its place, bearing "the character of the modern epoch, the incarnation of the will of the workers to construct the Communist State," is offering 100,000 roubles for a "Temple of Labour" which will combine beauty with utility. The ambitious scope of the project may be judged from the fact that the huge auditorium, to be the central feature of the Temple, must hold an audience of 25,000 with an orchestra of 500, and a Press Gallery to hold 500 Soviet and foreign journalists. Even the secondary auditorium is to hold 6,000 people. In England we serve the cause of "labour" in a less sensational way, and it is scarcely conceivable that at any future date our own socialists or other builders of Utopia would want to create such an architectural symbol of their aspirations. And is not the idea of an auditorium to hold 25,000 people just a little crude, out of date and decidedly *in*utilitarian? Have the authorities of the Soviet forgotten the wireless? Why collect 25,000 people under one roof to hear a speech or lecture, when by a mechanical device the same message can, if necessary, be communicated to 25,000,000? Yet, architecturally, the problem presented is of great interest. Either a "human" scale can be preserved, or else the form of the edifice will be deliberately contrived to belittle the human element so that the members of the audience appear insignificant. Already in St. Peter's in Rome the proper scale has been exceeded; in the Temple of Labour, three times as big, this particular problem of making a gigantic structure appear conscious of the scale of human beings will be even more difficult of solution.

STROLLING AUDIENCES

Commenting on Ambulator's letter in the last issue of THE ARCHITECTS' JOURNAL, and on the painting by Bibiena, which was illustrated as a frontispiece in the same issue, the *Evening Standard* expresses some doubt as to whether there is really a need for a theatre where the audience could promenade during performances. It is noted that the new Saville Theatre has a large salon under the auditorium, in which the audience may stroll and talk in the interval. I should say myself that such promenading space close to the auditorium was indispensable in a really first-class theatre. If a theatre audience was allowed to stroll about during the performance, the outside foyer, or salon, would, of course, become a sitting-out place, and might, in this event, contain such charming seats as those in the vestibule of the Skandia Cinema, Stockholm, of which an illustration appears on this page. To sit down before the play and during the intervals, and stroll about during the course of the performance, would be a novel and not unattractive way of spending an evening.

ASTRAGAL



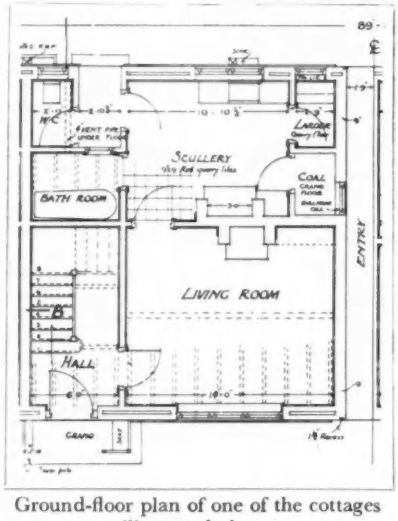
In the vestibule of the Skandia Cinema, Stockholm. Gunner Asplund, architect.

RECENT WORK AT [redacted] MELCHET COURT

FROM DESIGNS BY

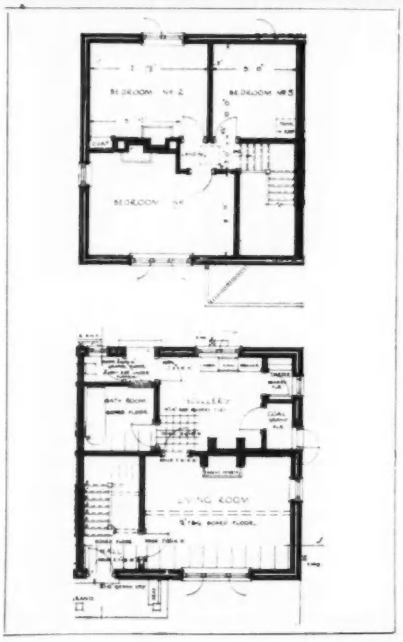
BUCKLAND AND HAYWOOD

A block of four cottages outside the entrance gate on the main Romsey-Salisbury Road.

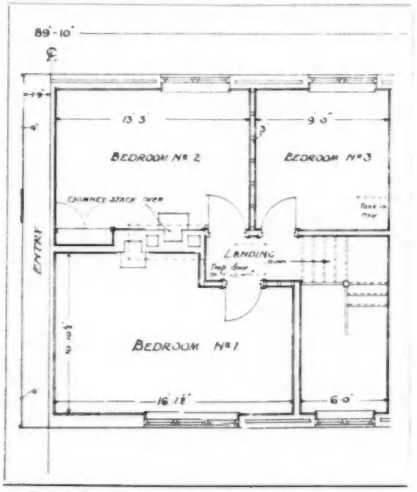


Ground-floor plan of one of the cottages illustrated above.

ON the following three pages is illustrated some of the more recent work erected on the estate at Melchet Court, near Romsey, Hants, for the late Lord Melchett.



Plans of one of the cottages illustrated below.

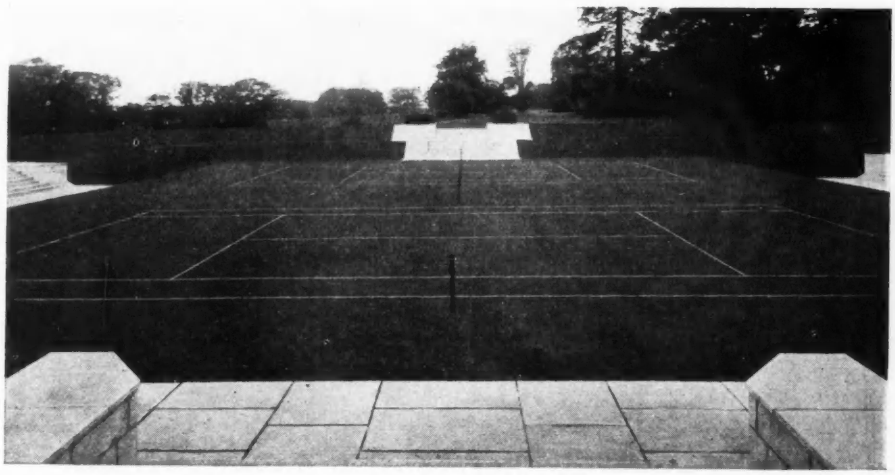


First-floor plan of one of the cottages illustrated above.

The cottages have been built to house the numerous people employed there, and the designs have been varied in order to harmonize more closely with the particular surroundings.

A pair of cottages near the Landford Wood entrance to Melchet Court. Note the design of the chimney-stacks and brick verges.

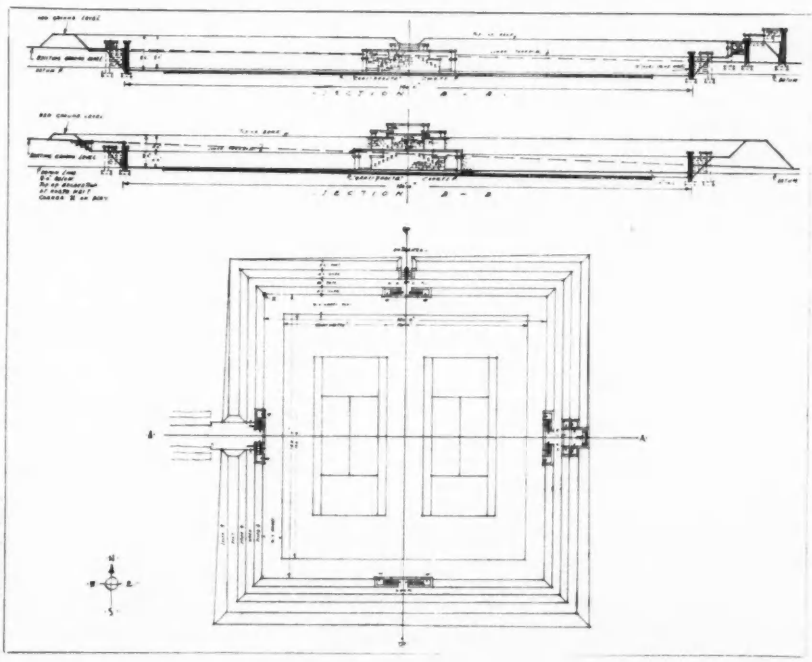
The tennis courts have a surround of stepped grass banks, 8 ft. high, which form a background for the players and afford good visibility. A near view of the entrance steps appears below.



The block of four cottages (page 300) is built with multi-coloured bricks with tile dressings to window openings. The treillaged porches give character to the whole unit.

A gabled treatment has been employed in the design of the pair of cottages in Landford Wood (page 300), the details of the chimney-stacks and brick verges being especially interesting.

The pair of cottages near the main house (page 302) have a character reminiscent of the Georgian period. The bricks are multi-coloured, laid diaper pattern, and the roof is covered with sand-faced pantiles. The linking together of the front entrance doorways and staircase windows over, carried out

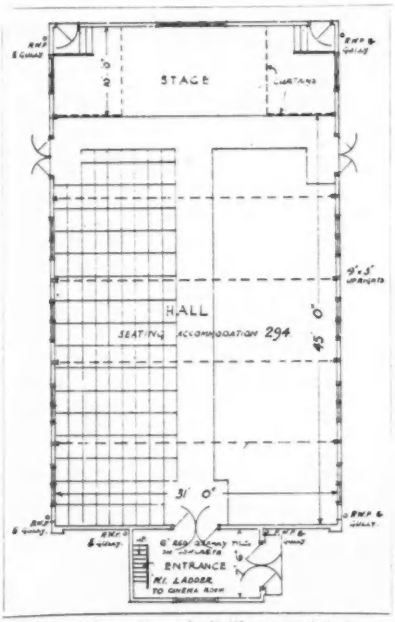


Plan and sections of the tennis courts. The overall length and width of the courts is 120 ft. respectively.

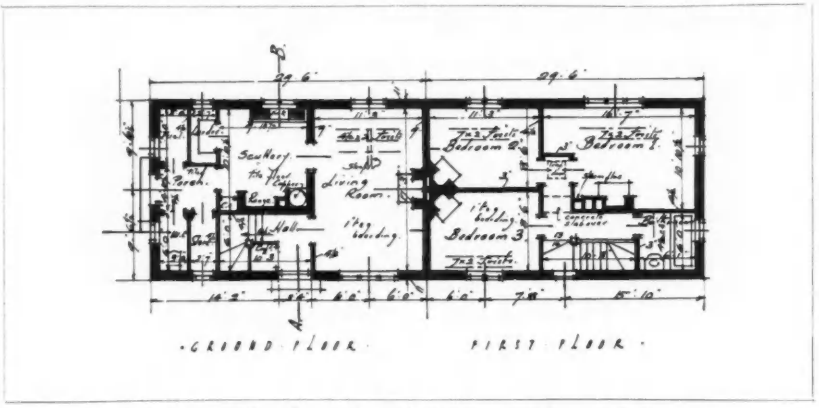
The main entrance steps leading down to the walk, which runs round the four sides of the tennis courts.

Tennis Courts, Melchet Court.] *[By Buckland and Haywood.*

A pair of cottages adjoining the main building, Melchet Court ; in multi-coloured bricks, white cement dressings and pantile roof.



Plan of the village hall illustrated below.

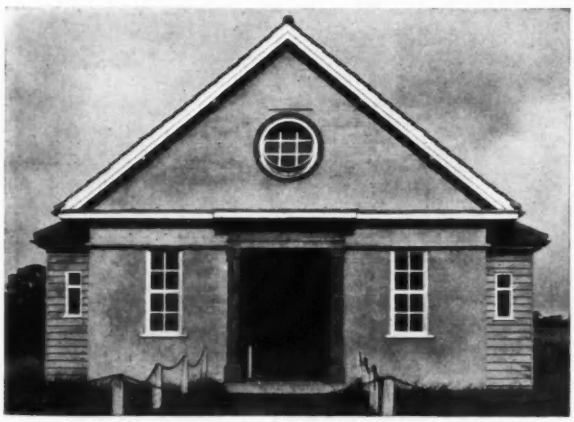


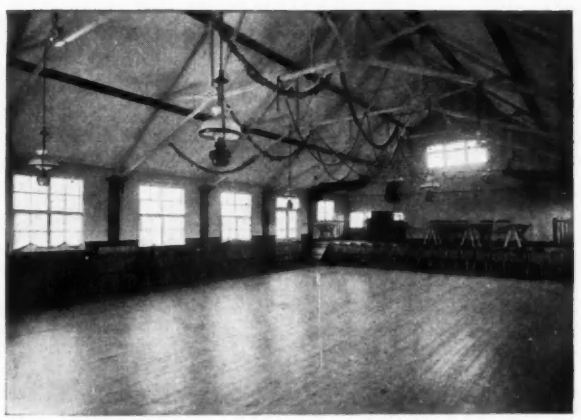
Ground- and first-floor plans of the cottages illustrated above.

in white cement, are interesting features in a well-balanced composition.

It was largely owing to the generosity of the late Lord Melchett that the building of Whiteparish Village Hall was achieved. The structure is simple in outline and expressive of its use; the entrance elevation is given a monumental character with its well-proportioned doorway and pediment.

Photographs and the architects' detail drawings of the Landford entrance gates and lodges, and a wrought-iron glazed door for a sculpture setting, appears on one of the special supplements accompanying this issue.





Cottages at Melchet Court and Whiteparish Village Hall.] [*By Buckland and Haywood.*

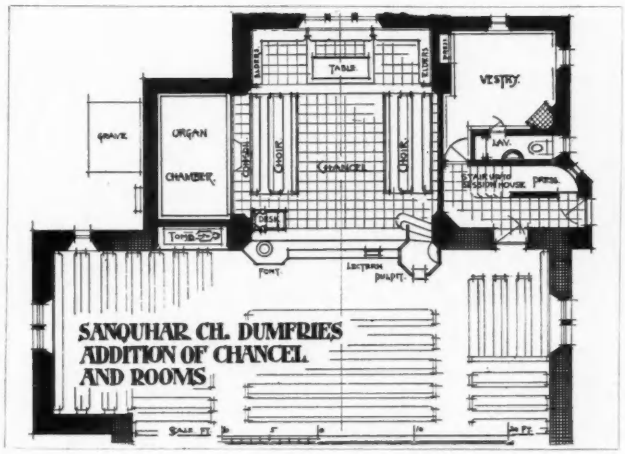
Whiteparish Village Hall, Wilts. The main front is in stucco, the remainder in weatherboarding. The roof is covered with pantiles.

ADDITIONS TO A DUMFRIES CHURCH

FROM DESIGNS BY JEFFREY WADDELL AND YOUNG

A general view of the new chancel. On the extreme left of the photograph is seen the font, and, further along, the lectern and the pulpit.

SCATTERED throughout the length and breadth of Scotland are a number of cathedrals, abbeys and parish churches which are as fine as anyone could wish to see. Sir Walter Scott made Melrose Abbey world-famous, and the Crypt or Lower Church of Glasgow Cathedral is admitted to be the finest in the world; but to the average individual who is not a Scot, these things are unknown, and Scotland has a reputation for having no ecclesiastical architecture worthy of the name. This arose, doubtless, from the fact that in post-Reformation times the churches that were built were shockingly plain and barn-like. But about the middle of last century Scotland shared in the fruits of the Gothic revival. All over the country churches were built; generally too broad, and with galleries round three sides, frequently with the pulpit in the middle of one of the long sides against the wall, and the seating grouped around it. Usually the walls were well built of good ashlar stone, with simple buttresses and traceried windows. Often all the art that was in the building had been put into the tower and spire, and invariably the exterior was more attractive than the interior. The Church of S. Bride, Sanquhar, belonged to this category. It is an ancient foundation, going back to Celtic times, and there was a fine thirteenth-century church on this site, fragments of which remain; but the problem was to modernize the interior and make it worthy of its fine exterior. This has been done, as the illustrations show, by gutting out the interior, opening up the roof, re-seating the area, building a transept, a recess for the fine mediæval effigy, and adding a large chancel, with organ chamber and vestries, as shown in the accompanying plan and views.



The ground-floor plan; and a view of the new transept. The interior of the church has been modernized by adding a new chancel, transept, organ chambers and vestries, and has also been re-seated throughout.

The font, octagonal in shape and executed in oak, is situated below the chancel arch. Another view of it is seen in the photograph on page 303.

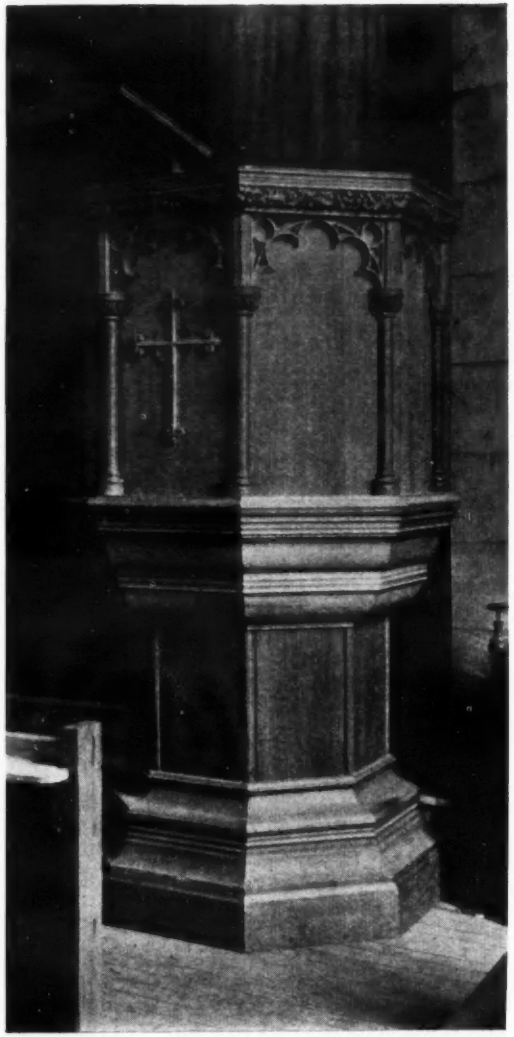
[*By JEFFREY WADDELL AND YOUNG*]

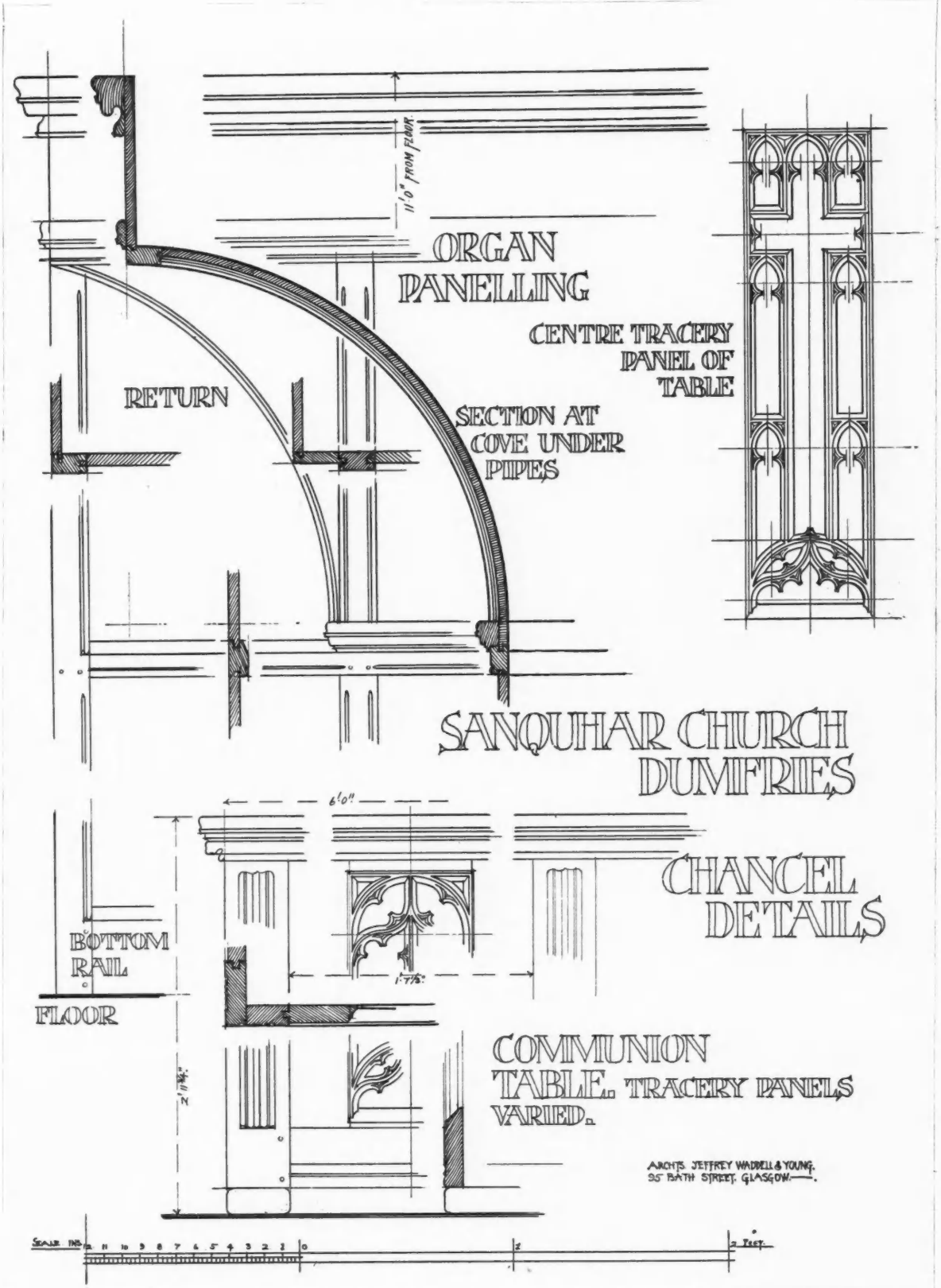
The communion table is of oak, and the steps are of marble. The architects' detail drawings of the tracery panels are reproduced on page 305.

A night view of the chancel. The organ is in the recess beneath the pipes on the left. Behind it is the organ chamber.

[*ADDITIONS TO A DUMFRIES CHURCH*]

The pulpit, like the font, is executed in oak. An inscription has been inserted in the panel immediately beneath the reading desk.





Additions to a Dumfries Church.] [*By Jeffrey Waddell and Young*

The architects' detail drawings of the chancel fittings, which are carried out mainly in oak.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xv

THE LAW'S MAJESTY

BY KARSHISH

(H. B. CRESWELL)

BEFORE I embark on an account of my second disaster I must fulfil my promise and give a short account of circumstances which led to my first, and which involved the Eureka Plough Company in arbitration and the loss of more than two thousand pounds. These circumstances, as I have said, remain unique in my experience and constitute a remarkable instance of the pitfalls that beset the architect, and of the devices by which dishonest purposes may profit by law to the confusion of justice.

There was access to the company's land at the back of the works both on the west, from Albert Road, and on the east from Sussex Street. The contract laid down that the contractor was to "form and maintain a suitable temporary road from the fence enclosing the site to the public road," for the purpose of carting away the twenty thousand cubic yards—more or less—of spoil from the "excavating for levels" which was comprised in Contract I of the Machine Shop Extensions; and, as firms tendering were at liberty to use whichever of the approaches suited them best and Sussex Street was the nearer to the site, the quantities—which formed part of the contract—gave the yard-run measure of the temporary road to Sussex Street as a "provision," so that any firm adopting the Albert Road access would know that a *pro rata* allowance for the increased length of road would be made to them. Mr. Andrew Gorringe, the successful contractor, elected to use Sussex Street.

Sussex Street was a little blind road that ran from the boundary of the company's property to the highway. It was only two hundred yards long, but it became a nightmare to me. It was a fashionable little street, with artisans' villas lined up on either side of it like strips of pink postage stamps, each with its bay window and a photograph of a well-dressed person—like an effigy from Madame Tussaud's—looking out into the street between a pair of lace curtains. Social appearances were strictly upheld in Sussex Street. At the risk of appearing discursive (and also a cad), I will add that in Sussex Street, as in higher walks of life, the best fruit was arranged at the top of the basket; for the company owned three of the houses, and it was my duty to see the backs of them as well as the fronts. In one a fitter, his wife and eight children lived entirely in the small back kitchen, in company—as make-weight—with a majestic St. Bernard dog; in another the coal-hole accommodated a perambulator and two bicycles which had been adopted as hen-roosts by the fowls from next door; and in the third the explanation given me for the paper being torn down in strips from the wall of a bedroom I had decorated three months before, was: "Yes. That would be my lodger lighting his gas from the passidge, of a night."

Gorringe had not long been digging before the residents of Sussex Street complained of the state of the road—and with good reason, for it fell from grace almost as completely as their own back yards. Clay, dropped from Gorringe's carts, formed a dense mud which prevented the road from draining and softened it so much that it speedily began to crush down under the heavily-loaded wheels and stamping hoofs. These complaints were passed on to me, and I called upon Gorringe to mend his ways; for he had contracted to "hold the company blameless from all damage to persons or property," etc. It then came out that Sussex Street had not been "taken over" by the local authority—the Nollingborough Urban District Council; for the road was a new one—shoddily made by speculators who had laid out the street—and the time had not yet come when need for repairing it would lead the Council to step in, impose a charge per foot of frontage on the owners of the property bounding it, properly re-make it, and maintain it out of the rates in common with other public roads. In some way or other, I also gathered up the surveyor of the District Council upon my shoulders in addition to the owners and tenants of Sussex Street, and Gorringe who was the heaviest burden of all.

The wrangling was interminable. The tenants complained to the company, whose servant Gorringe was; and to their landlords, who were the owners of the houses. The owners complained to the company, and also to Gorringe. Complaints were made by members of the public to the Council, who called on the owners to "keep in repair." The owners said: "It's not our fault; why don't you make Gorringe repair?" The Council complained to the company, and the company said: "Do it yourself: it's your business, not ours." The Council replied that Sussex Street was still technically a private road and it was impossible for it to be re-made and taken over until the carting was finished. Gorringe said he was using all precautions, and only three-quarters filling his carts—which was not true, for his whole course of more than a mile to the tip was marked by his droppings. Finally he fitted side-boards to the carts, and put on a wretched old man with a shovel to make a show of scraping aside the clay and mud. Before long, however, Gorringe was obliged to mend the road with broken rubbish to enable him to haul over it at all; yet, among all the preposterous considerations he urged, there was no suggestion of an extra, although the contract laid down that no claim for extra would rank unless it was made at the time the work was done. Thus with wrangling, complaints, protests and muddle and general disgust—the whole burden of which weighed on me—the contract was completed and new quarrels staged.

The first of these arose when I named the day from which the bonuses earned by the contractor were to be computed—for it need scarcely be said that, under the indulgent revision of the contract, Mr. Gorringe had no difficulty in earning big ones. It devolved upon me, as arbiter between contractor and building owner, to certify those dates: I did not press unduly upon the contractor, but, after hearing all he had to say, did him something more than justice for I knew the directors had no wish to avoid their full obligations. Gorringe, as usual, opened his mouth to full stretch as though, instead of a fact to be determined, a bargain was to be struck by haggling and the halving of differences; but, in the absence of any grounds for doing so, I refused to alter my decision.

The next struggle was also a personal one; and it employed us a whole day upon business that should have been settled in a couple of hours.

It was laid down in the contract that the contractor was to satisfy himself of the accuracy of the quantities for excavating for levels; and that if he raised no objections before he began the work, it was to be understood he accepted those quantities as accurate. He raised no such objection; but when the contract was revised and the new arrangements made for early completion, he persuaded Mr. Stevenson to agree that the excavating should be re-measured at completion; and as he was relinquishing part of what was included in his contract, his demand had more plausibility than most of his contentions. He had, no doubt, all along held a demand for re-measurement up his sleeve; for he must have

observed that the slope into which he dug showed on section a concave line and not a straight or a convex one, so that, after the ground had been dug away and there was no means of proving what the contours had been, the perpendiculars of an assumed uniform slope from back to front, would yield a much greater number of cubic yards of excavating than had, in fact, been dug. Gorringe, however, insisted that the transverse contour had been in great part *convex*, and as I had not made a contour-plan of the ground, and he refused to accept the notes in my surveying book on the ground that the company had agreed to *re-measurement*, I was obliged to compromise with the averaged contour represented by a uniform slope. By this means he probably got paid for nearly two thousand cubic yards more excavating and carting than he had performed.

When we began the actual levelling there was a wrangle nearly every time the staff was planted; and at one time Gorringe and my clerk appeared to be fighting for possession of it, for Gorringe would not allow the staff to be planted as the ground at the top of the cutting happened to come, but contested for inches—once actually trying to get the staff set up on what was clearly a mole-hill.

The vexation of all this nonsense was beyond endurance; but Gorringe must have gathered several hundreds of cubic yards by his shameless indulgence in it. The clerk who represented him at the level was an independent surveyor employed for the purpose, who read fairly and seemed abashed at what was going on, or things might have been even worse than they were. I came near refusing to measure and to insisting that the whole business should be handed over to an independent estimator; but if the contractor did not agree to this proposal it could only be enforced by an arbitrator; and, if he did agree, the person measuring would have to depend upon evidence of the former conditions, and a new and more formidable wrangle would have to be staged.

The last misery before the appearance of solicitors on the scenes, and the strain of the preliminaries of a reference to arbitration, was the receipt by me of the contractor's Statement of Account.

Gorringe had ended our differences over the dates of completion with the shrug of a man who makes the best of a bad business; but it was now to appear that he had done this to mislead me into thinking he had given way on the point so that I might be less inclined to oppose him in other matters, for his Statement included bonuses calculated from the dates he had named, but which I had disallowed. This extra claim amounted to £370.

There were three or four foolscap sheets of items extra on measurements taken in the quantities, or for work stated not to be fully covered by the descriptions in the bills; and the minute honesty of Mr. Gorringe was shown by his allowing one small omission item, of the value of four pounds three shillings and four pence. These details were all insignificant matters that would involve enormous labour in unravelling. The total value of the whole was something under £450.

Next came a charge for forming and maintaining temporary roads *inside* the fence enclosing the site. The specification required, as has been said, a temporary road from this fence to the public road, and a provisional item to cover it was included in the quantities. The contract further required the contractor to provide any tracks that might from time to time be necessary, inside the fence, and this also was covered by a general item in the quantities. Although there had been, from first to last, no confusion, nor any suggestion of a claim, for measuring the tracks inside the fence, the contractor now set it up, and based it—as we were later to find—on a quibble by which the word "site" in the specification was interpreted to mean either the area to be occupied by the building, or the ground enclosed by the fence surrounding the whole scene of operations, as best suited the contractor's ends. The amount of this claim was £560.

There was next a charge for forming and maintaining a temporary road *over the whole length of Sussex Street*. This, as we learnt when we came to arbitration, was based on the argument that Sussex Street, not having been "taken over" by the urban authority, was not a "public road," but a private road; and as the contract included a provisional measure for a temporary road "from the fence enclosing the site to the public road," Mr. Gorringe contended that he was entitled to include the length of Sussex Street, up to the public highway, in the measure of temporary road, and to be paid for it at the rate he had affixed to the provisional measure, since he had had to maintain and to repair Sussex Street. I may mention that our leader, an eminent K.C., afterwards scoffed at this contention. "It's all nonsense," he said; "Sussex Street was in public use and was, for all applicable purposes, a public road." The amount of this claim was £162.

Lastly, an allowance was claimed for "extra carting over temporary roads." This claim was so intricate and ingenious that it can only be made clear by illustration.

The excavating was in two parts: "A" and "B." The total contract measure of "A" and "B," together, was 20,000 cubic yards. "A" was relinquished by the contractor, who, after privately measuring, declared the amount to be 8,700 yards, which made the contract measure of "B" stand at 11,300 yards. The *actual* measure of "B" had, however, been agreed at 14,000 yards, so that the *contract* measure of "B" was 2,700 short, and therefore, *in respect of "B,"* the contractor had maintained temporary roads in excess of the contract provisions.

It is obvious that, as Gorringe had contracted to cart 20,000 yards, and had only been required to cart 14,000, an omission, and not an extra, was indicated; but my good friend argued that the new arrangement under which he relinquished "A" did not affect any matters not specifically included in that agreement; and he declared that, in coming to terms, he had allowed for a saving on road maintenance, and had relied on the quantities being correct. He, therefore, made up his little bill somewhat as follows:—

	£	s.	d.
178 yds. run temporary road as per provision in contract	133	10	0
747 yds. run temporary road inside fence	560	0	0
216 yds. run temporary road Sussex Street	162	0	0
Total	855	10	0
Following on this, he argued: As 11,300 yds. is to £855 10s., so is 14,000 yds. to the answer, which he gave quite correctly as	1,059	18	3
An extra of	204	8	3

Most people will think that this £204 8s. 3d. was better merited by the ingenious labours in claiming it than by the work represented in the claim.

The company refused to entertain any of these charges, and were indisposed to parley with Mr. Andrew Gorringe. Our Counsel, who had told us in consultation that the other side had not a leg to stand on in the major claims, was not, as so often happens, able to justify that opinion; for he was detained in court in the provinces, and the lesser man, also a K.C., who took charge of our destinies on the day before the hearing, had not the opportunity—nor, I thought, the ability—to master the intricacies and niceties of the case. The arbitrator was a very big, heavy surveyor—thick in limb, thick in body and thick in head; and he was unable to cope with the nimble wits of Gorringe's Counsel in the absence of a like agile equipment in ours. How the arbitrator arrived at his award I do not know, for he was not, as a judge is, obliged to tell us, and wisely preferred not to do so; but Gorringe must have won on nearly all the items, for the company had to

pay him more than £1,500 and his costs, in addition to the costs of the reference, and, of course, their own as well.

This ends the history of my first contract and my first disaster; but before I had finished instructing solicitors, collecting evidence and securing proofs, I was up to my neck in another contract and involved with another builder. How far this disaster was my fault the reader must judge. My own view is that I deserved more praise for getting the company out of pickle, than blame for putting them in it.

The contractors, who under Contract III erected the superstructure of the Machine Shop Extensions—including steelwork supplied under Contract II—upon foundations laid by Gorringe under Contract I, were not, in a true sense, builders, but were the kind of specialized financial adventurers, better called "contractors." P. and F. T. Wagworm, Limited, of Loughborough, was a private firm of twin brothers and a retired solicitor's clerk who had been allotted one share so that the brothers might limit their liability by constituting themselves a company—on the principle popular in America where a man, when his "bid" turns out all right, may make over his gains to his wife; and, if it does not, go smash and start afresh. The two Wagworms were, as twins, imperfect: although they aggravated their disconcerting facial and bodily resemblance by dressing alike in frock coats, lie-down collars, black bow ties and bowler hats—so that they looked as though they were a pair of undertakers slipping round the corner for a drink—they were not in the least of a size, so that the effect they gave of large and medium, in a special offer of Wagworm samples, was grotesque. They were youngish, pulpy, fair men, with long yellow moustaches and peach complexions, who looked as though they still fed through rubber teats; and as they were never seen apart I got the idea that they slept side by side in the same bed.

How I detested these men! They seemed to bring a spiritual effluvium with them when they came to my office in company with a gloomy, emaciated old estimating clerk to try and bluff me into certifying money they had not earned; or with men who were obviously sub-contractors, though stated to be in their employ, to cajole me into accepting work or materials inferior to those specified. The Wagworms were, however, capable organizers, bent on getting the contract finished out of hand, collaring the bonus for early completion which the company had offered them as a free gift after their tender had been accepted, and rushing off to land other fish.

The whole of the steelwork was on the site, erection-marked; exact drawings and a detailed specification were in the contractor's hands; they had brought their plant on to the ground allotted to them, and Piggott had put in a siding to receive trucks consigned to them. I saw all in train and the work started, and then went off for a four weeks' holiday after seventeen months of real, slogging work.

When I came back I could scarcely believe my eyes. The brickwork was everywhere up twenty feet; bricklayers were strung out along the walls like swallows on a telegraph line; and a forest of stanchions met my gaze. The weeks went by and the building rose like magic. By the time the walls were up the great lattice girders carrying the roof were being slung thirty-five feet into the air from shear-legs, and soon the patent glazing was slipping into place as one might tile a kitchen floor. Carpenters swarmed on the roofs; and slaters also, after I had condemned two samples of slates and sent back the first truck delivered, and had also had part of the roof stripped because I found slaters with composition nails in one pocket, only, of their aprons, and galvanized in the other. Piggott put me up to this: he noticed some galvanized nails dropped about. In this he served his own ends as well as mine, for he liked nothing better than doing a contractor in the eye: it was his view that no contractor did his work as it ought to be done, or, in other words, as Piggott himself would go for to do it. The building rushed up: the bonus, in fact, seemed in everyone's blood. It could only get there, of course, by way of the pocket.

Thus all went merry as a marriage bell. Beverly Kent had at last seen architect's work that he could suffer in silence; I was happy in the general atmosphere of success; and the directors were also highly content, but attributed the cause of their contentment, not to the activity of their Resident Architect, but to their own acumen in offering a bonus: yet in this they were hasty. When the last of the roof was being slated; the wood-block floor half laid and the painters getting along with the third coat; it was discovered that the hurry to earn the bonus had led to a mistake which, for more than a week, made it appear that the whole of the steelwork, including the stanchions and roof, would have to be taken down and re-erected.

NEXT WEEK: XVI—A FAILURE AND A SUCCESS

The previous instalments appeared as follows:

May 27. i: I am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.
June 24. v: My First Job: The "Pipes.'
July 1. vi: I Turn Clerk of Works.
July 8. vii: Bradshaw & Son: Builders.
July 15. viii: Joe Richards: Foreman.
July 22. ix: Trials of a Clerk of Works.
July 29. x: A New Venture.
Aug. 5. xi: The Resident Architect.
Aug. 12. xii: An Architect's Early Gruel.
Aug. 19. xiii: An Uphill Fight.
Aug. 26. xiv: A Disaster.

LETTERS FROM READERS

Art and Industry

SIR,—Mr. Carrington's proposals regarding an International Exhibition in London five years hence on Design in Civilization reminds me of Hans Andersen's story of *The Emperor's New Clothes*. If the newly formed Board of Trade Committee under Lord Gorell's chairmanship is to perform a real service to industrial design, it won't emulate the weavers in the story who persuaded the Emperor to have clothes made of the magic material that became invisible to everybody "who was either unsuitable for his position or very stupid." The weavers knew that the Emperor wouldn't admit that he couldn't see the new clothes they pretended to make of that material, and they banked on everyone else lying about the affair too, with the result that the Emperor paraded the streets of his capital in the best gent's underwear, while all the spectators pretended to admire the clothes that weren't there. If the committee is going to persuade this country that there is any industrial design worth exhibiting, and if the constitution of the committee is so august that people will be afraid of being thought "unsuitable for their position or very stupid" if they differ from its conclusions, we shall be landed into exposing British industry's deficiency to the world just as ridiculously as the Emperor's undergarments were exhibited to his subjects.

The committee's terms of reference are admittedly difficult; a trifle idiotic perhaps, but they are at least consistent with the English love of putting the cart before the horse. Only humourless officialism could conceive that preparations for exhibitions should come before a critical examination of whether there is anything fit to exhibit. Infernal phrases, like looking a gift horse in the mouth, are always being dragged from their tombs to frighten people from being candid about some potentially stupid thing at the particular time when its potential stupidity wants emphasizing. By great good fortune there are on this committee such men as Howard Robertson, Clough Williams-Ellis, C. A. Richter, Harry Trethowan, Roger Fry and Professor Tristram, and one cannot imagine those lucid and vigorous minds allowing the committee

to recommend anything that would bring upon British industry the sort of ridicule that would inevitably follow the application of Mr. Carrington's suggestions. Before those suggestions are seriously entertained, a period of constructive and intensive education in the economic significance of good design must first help industrial administrators to organize the production of "articles of everyday use and good design" that could be exhibited for the benefit, and not to the detriment, of British industry.

If the committee needs evidence of the peculiar deficiencies of British industrial design, the architectural profession, as Mr. Carrington points out, can indicate many of the directions in which education and improvement are essential. Such organizations as the Design and Industries Association and the Royal Society of Arts are also equipped with valuable experience in liaison work between design and industry. No doubt this experience, and indeed the whole body of constructive criticism that has been built up during the last quarter of a century, will be at the disposal of the committee. But what would help the committee's work, and the improvement of industrial design, and would indeed advance the whole cause of civilized prosperity in this country, would be two or three exceptionally severe winters, which would clear out of the boardrooms of the land the senile and obstructive survivals of that time of easy money and planless muddle—the nineteenth century. JOHN GLOAG

SIR,—I was interested to read the proposal made by Mr. Noel Carrington with reference to the setting up of a permanent or temporary exhibition with a view to stimulating industrial design. I am certainly of the opinion that there is a very wide scope in this country for improvement from an artistic point of view in many of the objects that we come across in our everyday lives, from the architecture of houses to the design of common articles of household use. Many of these, through lack of knowledge and taste, are unnecessarily far below a decent æsthetic standard, and if opportunities are afforded of seeing the best that can be produced in these directions I am sure it would have a valuable educative effect both amongst the public and among those whose task it is to produce such things.

I believe they have even gone so far in Germany as to have exhibitions of ugly articles showing what to avoid, and no doubt such a collection would be both valuable and interesting. I am inclined to think that exhibitions of a permanent nature are more useful than those that are gathered together for a temporary special purpose, and if representative designs and articles of the best that we can produce in this country were shown regularly in our museums and art galleries, both in London and throughout the country, this would seem to be most likely to produce the result desired.

No doubt we shall be receiving in due course expert advice on this subject from the recently-appointed Board of Trade Committee under the chairmanship of Lord Gorell, dealing with the relationship between art and industry.

There are some very good names on the committee, but glancing through them it does seem to me most regrettable that there is no direct representative of the craft of the decorator, in view of the vital part which it plays in the selection and use of the whole range of decorative materials, and I sincerely hope steps may be taken to remedy this omission. Architecture receives the recognition which it is richly entitled to, and it will certainly make a valuable contribution to the discussion of the subject and the conclusions drawn. GEOFFREY LE M. MANDER
(CHAIRMAN, MANDER BROS., LTD.)

[Mr. Henry G. Dowling, president of the Incorporated Institute of British Decorators, has now been appointed a member of the Committee set up by the Board of Trade, under the chairmanship of Lord Gorell, to deal with the relationship between art and industry, referred to in the preceding correspondence.—ED., A.J.]

The Cups Hotel, Colchester

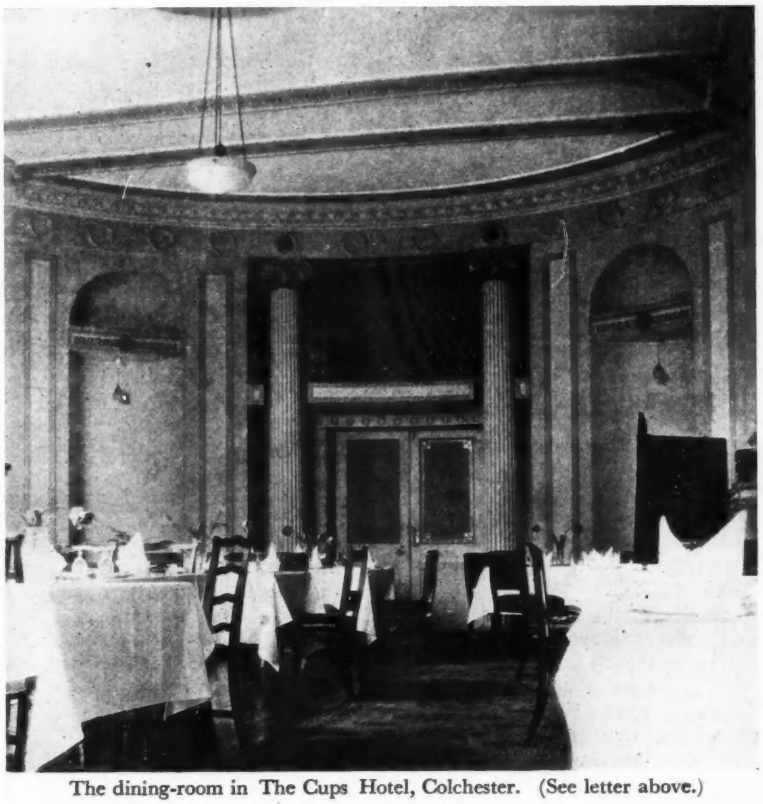
SIR,—The dining-room of The Cups Hotel, Colchester, of which I enclose a photograph, was evidently built as a ballroom, since when it has suffered many vicissitudes. One fireplace has been entirely altered, the doors have suffered mutilation and the floor-level has been raised about four inches.

In spite of this it still remains an imposing room, unexpectedly hidden behind an Edwardian front in the best villa-classic tradition of brick and stone.

Judging by the design, the architect was a local man working in the Adam manner, but influenced considerably by the Greek revival. The musicians' gallery shown in the photograph is a delightful piece of detailing. I was unable to discover any historical facts about the room beyond those deduced from its design. S. H. GARDNER

Building Costs

SIR,—In his references to an article that appeared in *The Times* as to building costs, Astragal, in the last issue of the JOURNAL, makes a small slip. The writer of the article does not contend that in 1913 the machine could do no more as regards lowering costs of building in the face of



The dining-room in The Cups Hotel, Colchester. (See letter above.)

advancing wages, but that such a time would come.

For all that, in connection with the erection of small houses with the older materials, it is at least arguable that such a time has come. Small builders, with no better equipment than the proverbial two trestles and a scaffold board, are even now assembling the machine-made parts at least as cheaply, if not more cheaply, as large contractors with thousands of pounds' worth of plant. Astragal, therefore, though slightly in error in detail, sums up the case very ably. "READER"

The Pedestal Basin

SIR,—The builders who fixed the particular fittings alluded to in your issue for August 19 are correct in stating that it is not, generally speaking, practicable to fit up pedestal basins in the way your correspondent desired his work done.

It can be, and has been done as we know, in the way desired. But it means that cost has not been taken into account, and if the supply pipes are laid in the floors, or brought up through the floors, a responsibility is undertaken by the owner, for there are possible leakages to be taken into consideration.

It is also necessary for lead or other easily pliable pipes to be provided in such cases, and the chance of damage to ceilings underneath has to be thought of, which is not always possible to avoid when pipes are hidden away out of sight.

As the pedestals are now made with large slots cut out at the back, pipes can be brought up inside them for a certain distance, and then taken out through the slot, shaped, and connected up to the taps and waste, but we do not consider this a very practicable job.

Another way would be to form a shield of pottery as a pedestal to use whenever it is desired entirely to cover pipes that are unsightly; but here, again, there are many disadvantages to be faced, and the cost of such a shield would be against its adoption. Also, to cut out a slot to the floor would lead to considerable loss to the manufacturer of the pottery; so that, considering everything, our opinion leads us to agree with the builder, who ventured the opinion that it was not at all practicable.

In fixing pipes, a great deal can be done to minimize the unsightliness of them by the skill of the individual workman. GEORGE JENNINGS, LTD.

SIR,—We note with interest your correspondent's letter regarding the pipes in connection with a pedestal lavatory basin, and feel, like the average politician, that we are able to sympathize with both parties.

Taking your correspondent's view first, we are entirely in agreement with him in desiring all piping to be as unobtrusive as possible. We are afraid, however, that he overlooks the point that the pedestal of a pedestal lavatory is designed chiefly as a support, other means not being suitable, or as a matter of personal preference. These pedestals, which vary greatly in shape and capacity, are made hollow solely for manufacturing reasons and not with the intention of concealing pipes, although the hollow nature suggests this. An experienced mechanic, under suitable direction and supervision, could arrange his supply and waste pipes with trap in a symmetrical fashion without offence to the eye of a cultured individual, curling and sprawling pipes being evidence of an uninformed outlook in these matters.

The pedestal forms an excellent screen where due regard has been paid to the arrangement of the pipes, and we repeat that this grouping need not be at all unsightly.

In conclusion, while it is not impossible to accommodate the hot and cold supply pipes, trap, and waste pipe in a pedestal of suitable dimensions, it is very close work, and frequently outside the capacity of the "curling pipe" exponent. The major objection, however, is that the important joints connecting the main supplies and waste to the branches at floor level are out of sight and inaccessible, as also is the cleaning screw of the trap. Consequently, any leakage therefrom must assume extensive proportions before indicating itself on the ceiling below.

In a good installation there is also the question of the disposal of the vent pipe, which can hardly be accommodated in the pedestal, and this question is not satisfactorily settled by the omission of this valuable detail.

REG. H. HELLYER
(DENT AND HELLYER, LTD.)

SIR,—Ample provision is made by earthenware manufacturers for the taps and waste to be taken through the pedestal, and we cannot for a moment see what objections the builder could raise to taking the pipes through it.

W. HULME
(MANAGING DIRECTOR
MORRISON, INGRAM & CO., LTD.)

HOLIDAY SKETCH CLUB COMPETITION: RULES

1. One more competition is to be held to cover the 1931 holiday season, the closing date being Tuesday, September 15 next.

2. The competition is open to any reader of THE ARCHITECTS' JOURNAL.

3. Two prizes, a first prize of Ten Guineas and a second prize of Five Guineas, will be awarded for the best and next-best sketches sent in.

4. No competitor can win more than one prize.

5. A maximum of five drawings may be submitted by individual competitors for the competition and must be sent complete under the same cover.

6. The size of the drawings is not to exceed that of Royal drawing-paper, i.e. 24 inches by 19 inches.

7. All drawings should possess some definite architectural or craftsmanship interest, but they need not be exclusively concerned with buildings, and drawings of boats, vehicles, etc., will also be eligible.

8. The drawings will be judged by the Editor of THE ARCHITECTS' JOURNAL, whose decision will be final.

9. Entries for the competition should reach the Editor of THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate, Westminster, S.W.1, by the first post on September 15. The result of this competition will be announced in THE ARCHITECTS' JOURNAL for October 7.

10. A motto of one word is to be chosen by the competitor, who will remain known by this motto until the award has been made. Only then will his identity be divulged.

11. Each entry must be accompanied by a sealed letter giving the competitor's name, address and occupation (whether principal, assistant or student). The letter should also state that the competitor will observe the rules of the competition and that the drawings submitted are his work, executed on his holiday this year. It must be enclosed in an envelope sealed with a blank seal and bearing nothing but a motto label on which is written the motto chosen by the competitor and the number of drawings entered. Copies of this label will be found on page 291 of the last issue of THE ARCHITECTS' JOURNAL.

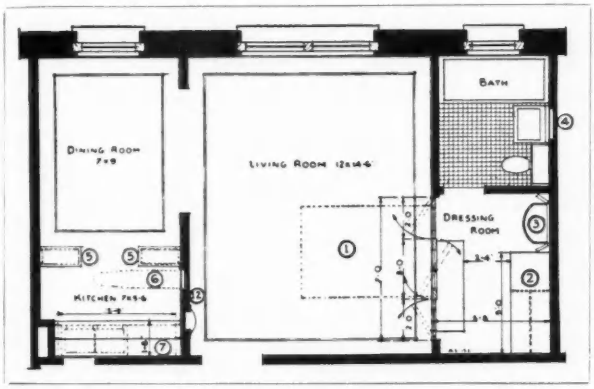
12. Each drawing must bear on the back a similar motto label bearing the competitor's motto and the number of drawings entered. No other means of identification must appear on the drawing. Drawings bearing a signature will be disqualified; so will drawings not bearing the printed motto label.

13. Owing to the drawings being submitted under a pseudonym no acknowledgment can be sent.

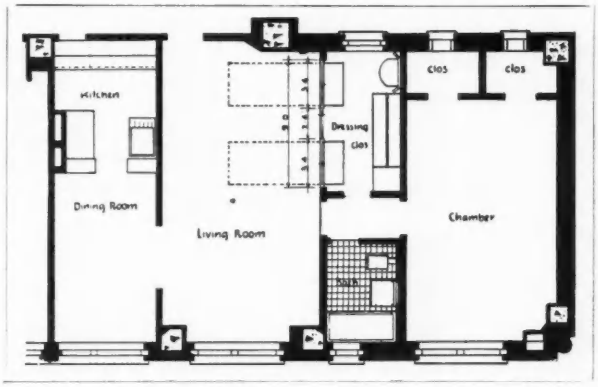
14. THE ARCHITECTS' JOURNAL will publish a selection of the drawings submitted.

15. No responsibility can be taken by the Architectural Press for loss or damage.

THE HOTEL OF YESTERDAY AND TODAY



Plan of a standard suite-flat in an Apartment Hotel in North Avenue, Chicago. Jarvis Hunt, architect.

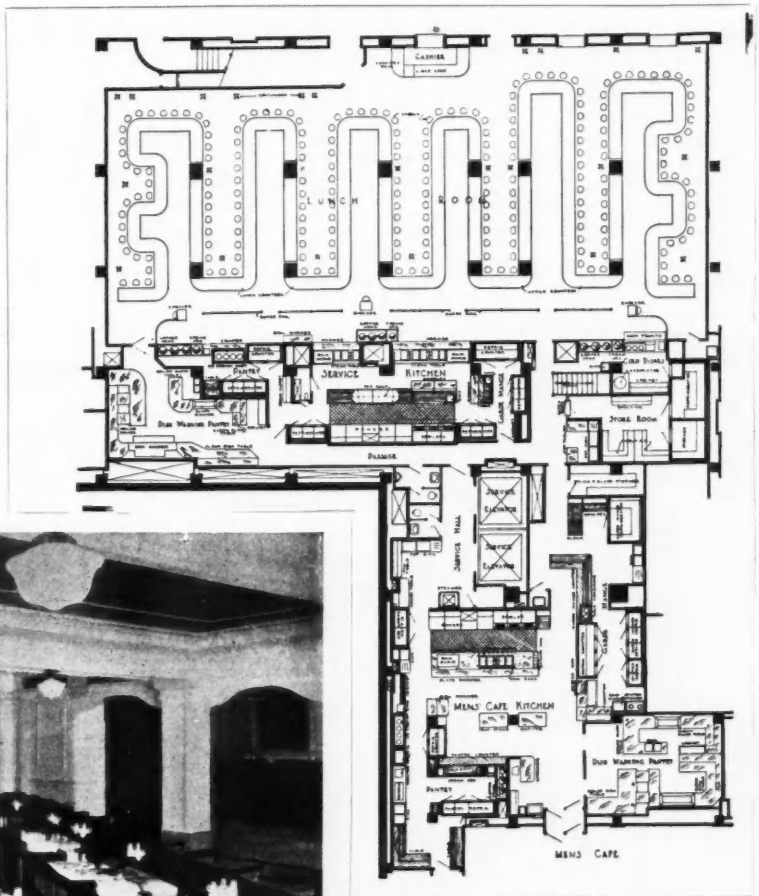


Plan of a standard suite-flat in the Georgian Apartment Hotel, Evanston, U.S.A. Albert Hecht, architect.

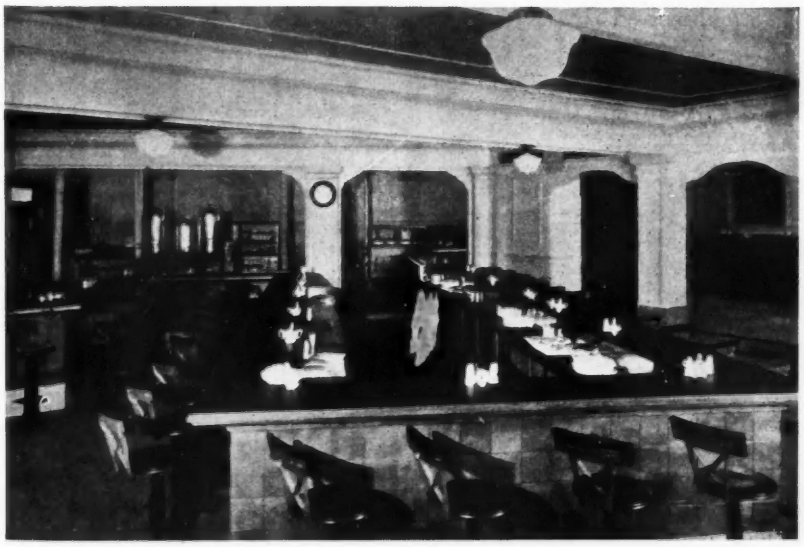
THE eighth of the Julius Hoffmann Verlag's *Baubücher*[1] is absolutely indispensable to the hotel-architect and the hotel-proprietor. So exhaustively technical and detailed is its survey of everything pertaining to hotel construction and hotel equipment that its appeal to the general reader is perhaps rather more doubtful. And yet this is an absorbingly interesting book.

Problems such as centralized and decentralized kitchen layouts are authoritatively and dispassionately discussed. We learn that for every square metre of restaurant space, 0·3 square metre of kitchen floor-space will be required; whereas for the preparation of breakfast alone only 0·02 square metre of kitchen space per square metre of bedroom is necessary. Restaurants must aim at intimacy and no longer exceed one floor in height. A *bidet*, which not one English hotel in 500 provides, is a necessity, not a rather dubious Gallic luxury. Suppression of boot-jacks has disastrous results for the chairs and curtains. The question of wood and metal for beds has apparently not yet been definitely solved. The rug has

[1] *Der Hotelbau von Heute.* By Fritz Kunz. Stuttgart: Julius Hoffman Verlag.



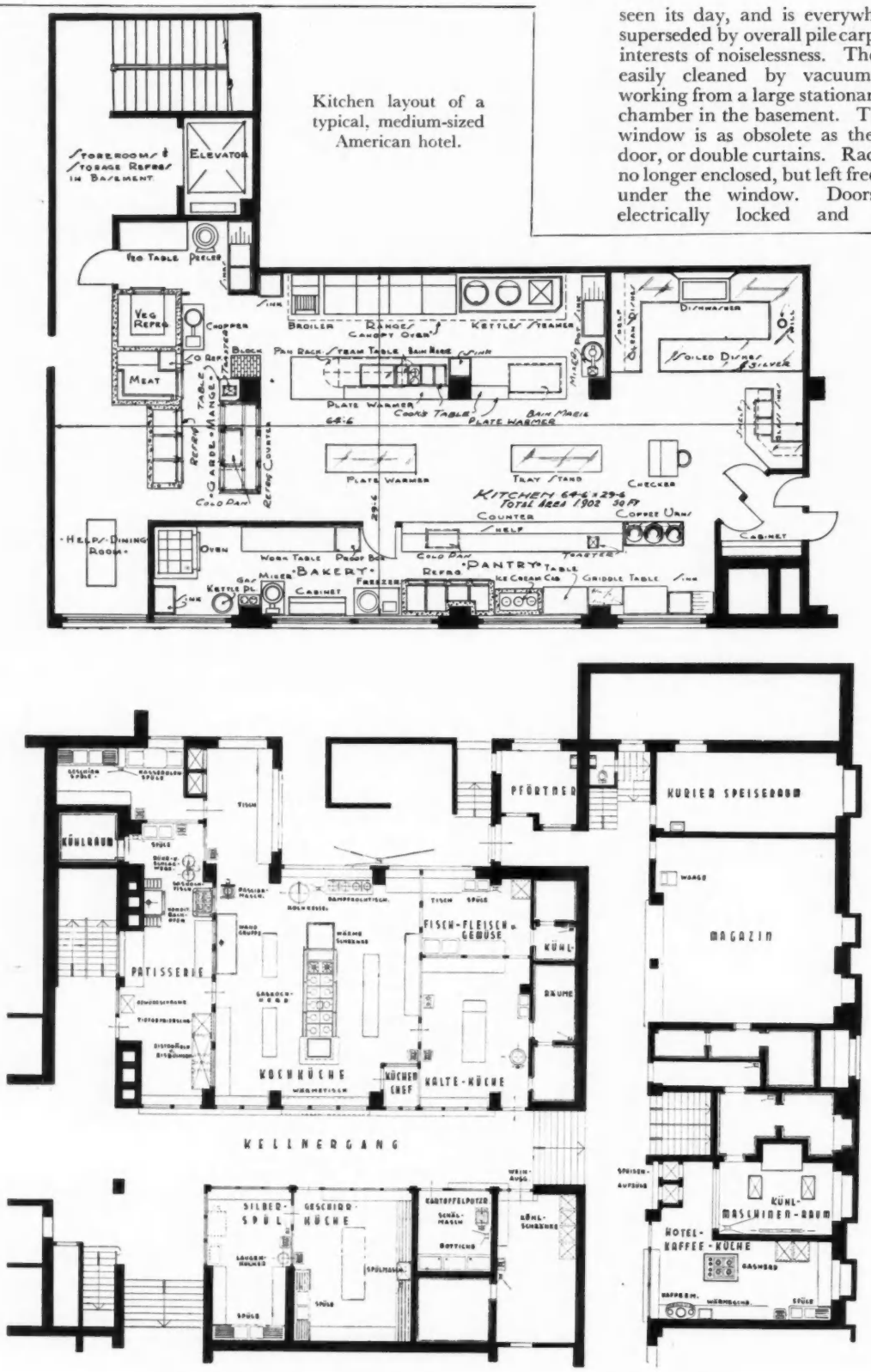
Floor plan of the main lunch room, Palmer House Hotel, Chicago.



Quick lunch counter at a station in Hoboken, New York.

Kitchen layout of a typical, medium-sized American hotel.

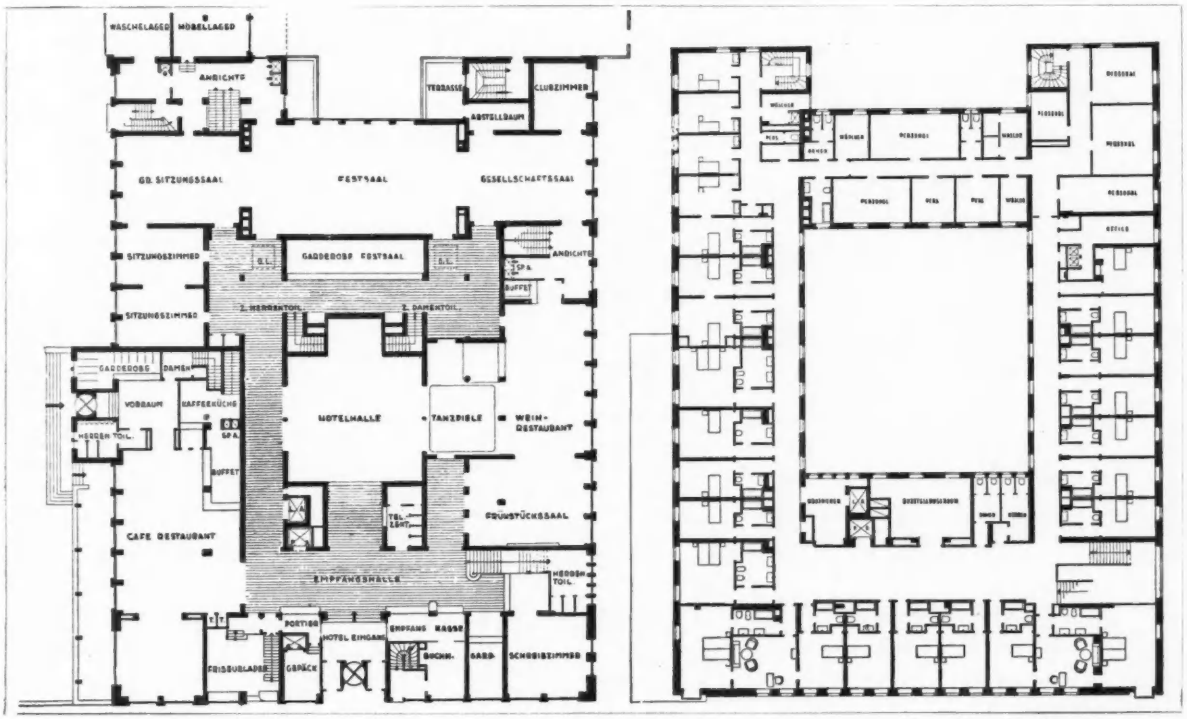
seen its day, and is everywhere being superseded by overall pile carpets, in the interests of noiselessness. These can be easily cleaned by vacuum cleaners working from a large stationary vacuum chamber in the basement. The French window is as obsolete as the panelled door, or double curtains. Radiators are no longer enclosed, but left free-standing under the window. Doors can be electrically locked and unlocked



Kitchen floor, scale 1 : 500, Haus Rechen Park Hotel, Bochum, Germany.
Professor E. Fahrenkamp, architect.

[*From* Der Hotelbau von Heute.

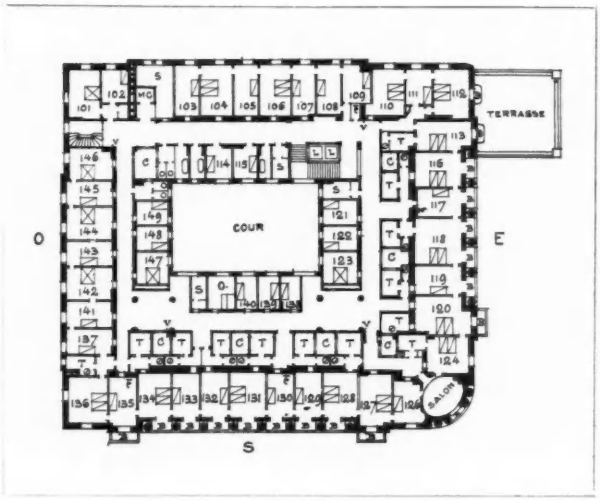
Breidenbacher Hof Hotel, Düsseldorf. View from the Hindenburg wall. Professor E. Fahrenkamp, architect. The hotel at last succeeds in achieving true civic dignity without ostentation or bombast. This building, one feels at once, could not possibly be in America, or the work of an American architect.



[*From* Der Hotelbau von Heute.

Ground-floor and typical upper-floor plans of the Breidenbacher Hof Hotel, Düsseldorf.

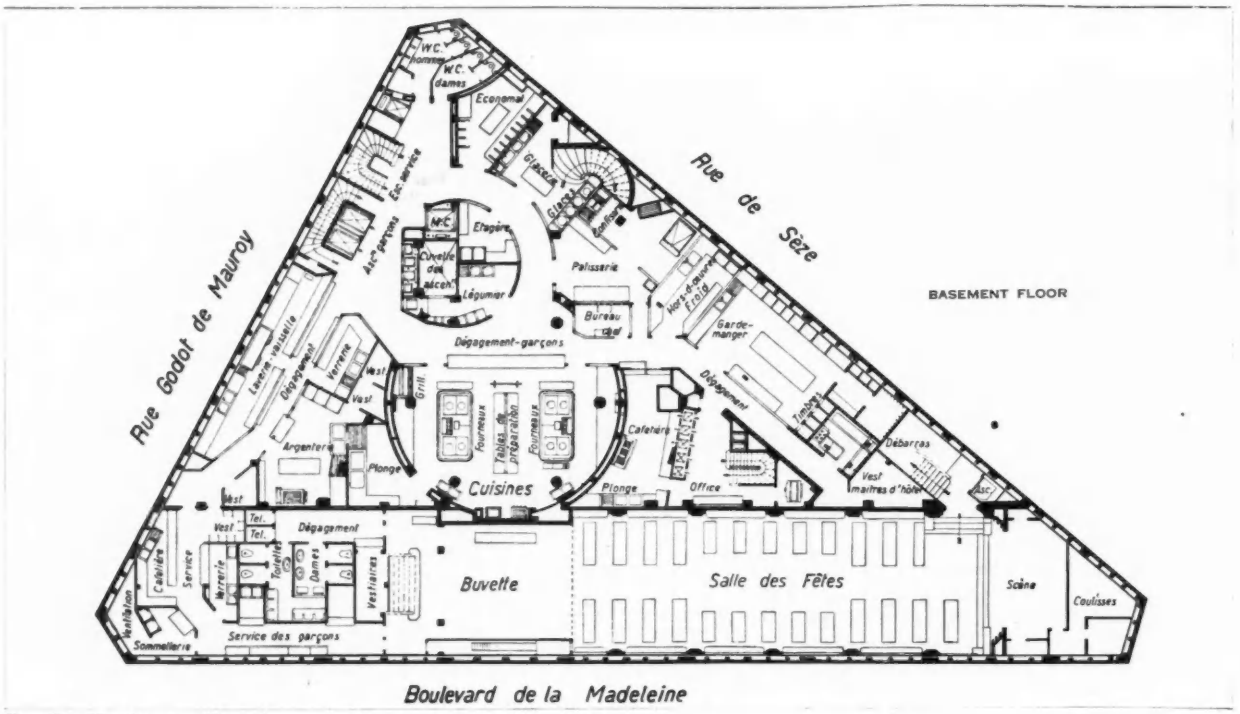
Bellevue Palace Hotel, Berne: a typical pre-war Swiss example of the "luxury" hotel, in which great importance has been attached to façade values.



from one's bed. Hand-drying apparatuses are on the market, as are also washing basins with a separate vent for gargling. Baths, like furniture, are built as much into the walls as possible. In some cases the bed alcove is being revived for the same reason. Bath rooms need to be automatically ventilated ten times per hour, though in the case of the kitchens this has to be increased to 25–30 times an hour.

As regards construction, the steel frame has certain undeniable advantages over the concrete skeleton: it occupies a shorter time in erection, it saves valuable space in basement floors, its parts are largely interchangeable, it offers greater facilities for building on new stories, it affords a saving in weight, it has an ultimate value as scrap iron. The last is a more important consideration than it might seem at first sight, for Herr Kunz scales down the life of a modern hotel from 35 to 20 years. P. M. S.

A general view of the Hôtel de Paris, a plan of which appears below.



From Der Hotelbau von Heute.]

Hôtel de Paris, Boulevard de la Madeleine, Paris. Molinié et Nicod, architects. An ugly, but ingeniously planned triangular building of reinforced concrete construction, faced with stone. The four top floors are progressively set back.

THE SPECIFICATION WRITER

Steam-heating an Open-air Swimming Bath

THE effective heating of an open-air swimming bath naturally presents difficulties not encountered with covered baths. With the latter, some form of heating and purifying apparatus is always used, but only a few cases are known where plants have been installed for open-air baths. In the case of the swimming bath at St. Helen's School, Northwood, Middlesex, electric power was not available for the pumps, etc., and the building of a deep stokehole would have been difficult and costly. A simple form of steam-heating plant, therefore, was decided upon, to circulate and warm the water by means of steam injection.

The bath is fitted with four chromium-plated gratings, 9 ins. in diameter, two at the deep end and two at the shallow end, connected by a galvanized steel pipe running underground. At one point in this pipe a specially-designed ejector heater is fixed, and is supplied with steam at 60 lbs. per square inch pressure from a vertical steam boiler erected in the boiler house adjacent to the bath. The ejector heater is fitted with isolating valves and a special by-pass arrangement whereby the bath can be filled through the ejector at the same time as steam is being blown in. Thus, there is no delay in filling and warming the bath, both operations being carried out simultaneously if desired. The layout of the boiler house is as simple as possible. Ample space is provided for coal storage, and the boiler is fitted with the necessary gauges and boiler-feeding equipment.

The action of the plant is as follows : As soon as the valve is opened in the boiler house, steam is supplied to the nozzle of the ejector heater, and water from the deep end of the bath is drawn through the connecting pipe and discharged, warmed by the steam, into the shallow end of the bath at the rate of 15,000 gallons per hour.

The advantages of these arrangements are :

1 : The water from the deep end of the bath is drawn out and delivered into the shallow end at high velocity, so that a continuous circulation is set up, and the temperature of the water throughout the length and breadth of the bath is raised uniformly.

2 : The steam used for heating the water also promotes circulation, so that no power is required for the pumps, and there are no moving parts to the apparatus.

3 : Live steam is not admitted to the bath direct, and it is safe for persons to swim while heating is taking place.

4 : As the water is being continually circulated during the heating period, there is no chance of stagnation and a certain amount of aeration and sterilization takes place owing to the action of the steam jet.

The whole plant was designed to raise 75,000 gallons of water 10 deg. Fahr. in ten hours, due allowance being made for the loss of heat by wind, etc. Actually the bath was a little deeper than originally planned, so that the total contents are now over 80,000 gallons. Nevertheless, it was found on test that the plant was capable of raising the water 1½ deg. Fahr. per hour, as against the designed rate of 1 deg. Fahr. per hour. The difference in temperature between the deep and shallow ends after heating was very small, there being not more than 1 deg. Fahr. variation throughout the length and breadth of the bath.

The pool itself is 80 ft. long by 30 ft. wide, and is 7 ft. 6 ins. deep at one end and 3 ft. at the other. The walls and floor are of reinforced concrete. At the N.E. and the S.W. ends white glazed scum channels are built in the wall. Along each side of the length of the bath a perforated galvanized iron handrail is fixed, slightly above water level. This can be used for shower purposes, and is controlled by a number of hand-operated valves within easy reach of the bathers. The deck or path surrounding the bath is formed of red

The steam-heated open-air swimming bath at St. Helen's School, Northwood, Middlesex.

and buff tinted paving slabs. The diving stage has two diving boards, with adjustable fulcrum, 4 ft. 6 ins. and 10 ft. from the water level.

Foundations i: The Site

BY B. O. NASH

THE strength and stability of a building depends to a large extent upon the design of the foundations, and the cracks so often seen might have been prevented if a little more attention had been paid to the bearing value of the ground. It is of primary importance when choosing a site to ascertain that the ground is capable of supporting the loads it will be called upon to carry. Trial holes should be excavated at convenient spots and carried to a depth of three or four feet below the probable lowest foundation. Care should be taken to avoid choosing positions near the future foundations of the building, otherwise a weak bearing area will occur in the region of the filled-in trial hole.

VALUE OF TRIAL HOLES

I recall a case in which the foundation concrete of a building was deposited on good red marl, but at the rear of the site a soft spot was found. This led to further investigation and it was discovered that within a foot of the underside of the concrete there was a bed of running sand. This entailed a complete re-design of the foundations and the formation of a reinforced concrete raft over the whole site. Considerable delay and expense could have been avoided in this case if trial holes had been sunk before the building was commenced.

Trial holes also indicate whether excessive water is likely to be encountered, and whether close or open boarding will be necessary to the sides of the excavation. It is a good practice to include a section of the trial hole in the bills of quantities. Borings are sometimes substituted for trial holes, but they are not so satisfactory, as the material brought to the surface by the boring tools does not give a fair estimate of the consistency of the material in its natural bed. Trial holes also are of great assistance in deciding whether the basement floor and the walls should be designed to resist water pressure. If subsoil water is met with, the probable increase in height during wet periods must be allowed for in the design.

The probable collection of surface water round the walls of a basement constructed in an impermeable clay is a frequent source of danger. I have known basements constructed in a perfectly dry clay site, but within a few months cracks have appeared in the basement slab, and has lifted it owing to water pressure—the excavation into the clay for a basement forming an impermeable tank for the collection of surface water. This has mounted up behind the walls and found its way under the basement slab, until the pressure has caused the water either to work through the basement slab or has lifted the slab itself.

SUPPORTING THE BUILDING

Reverting to the actual foundations, there are two methods by which a building is supported: first, by direct bearing on the ground, and secondly, by friction against the material of which the ground consists.

In the first case the foundations are spread, in order that the load per foot super does not exceed the load that the ground will safely carry. In the second case piles are driven into the ground until a satisfactory set has been obtained and it is estimated that the pile will not appreciably settle under the load it will be called upon to bear.

In the case of spread foundations, care must be taken that the load per foot super over all the foundations should be equal, otherwise unequal settlement will occur and cracks will appear.

The materials most commonly founded on, in this country, are as follows: rock, chalk, ballast, clay, and sand.

Rock will support a considerable load, providing it is solid and not laminated. If the rock strata is sloping, there is a danger of sliding, but the more frequent source of danger is due to founding on a thin stratum of rock having a void or a layer of soft material between it and the stratum below. When the foundations are loaded, settlement takes place. It is nearly always advisable before the concrete is placed to jump or drill a hole one or two feet into the rock to ensure that it is solid. For wall foundations on rock the concrete is often dispensed with, for, as the rock will take as high a load per foot super as the brickwork, a spread foundation is not required, and the rock will only require cutting to a level bed ready to receive the brickwork. Finely-laminated rock is frequently found in South-West England and forms a satisfactory foundation, although water is often found flowing between the laminations.

"SOFT" SPOTS

Chalk and limestone form a satisfactory bearing material and can be stressed to loads varying from four to eight tons per ft. super. The danger with chalk is the liability to faults due either to upheavals or to deep roots of trees. On a site in Surrey two trial holes were sunk, both indicating solid chalk for a depth of at least twelve feet from the surface. When the excavation for the basement of the building commenced, a fault approximately fifteen feet wide was found with vertical layers of white sand, brown sand and hoggin, i.e. ballast bound with clay. As no bottom could be found to these layers, the foundations were re-designed giving a considerable spread on these softer materials. The original spread on the chalk was reduced in order to increase the load and to prevent unequal settlement. The foundations were also reinforced longitudinally with the idea of bridging over "soft" spots which might occur.

Ballast can be loaded to four or six tons per ft. super providing it is closely packed and is well graded from coarse to fine. Where water is flowing through the ballast a lighter load must be taken as the water tends to withdraw the finer particles, leaving voids with consequent settling of the ballast under load. Foundations in ballast must be taken sufficiently far below the surface to prevent the danger of the ballast heaving up at the sides of the foundations. If this occurs the ballast under the concrete will tend to move laterally and settlement will occur. The effect of this is obvious when walking on any beach. Ballast bound with clay is more stable and is less liable to this fault.

LONDON CLAY

There are many types of clay. Red marl is found in many parts of the country and forms a very satisfactory bed for foundations. The London blue clay found in the Thames Valley is not, as its name implies, peculiar to London, as it is also found in Dorset. The grey shaley clay found in many mining districts is usually very closely packed, and I should have little hesitation in loading either of these materials to three or four tons per ft. super. The clay found most frequently within twenty or thirty miles of London is a compact brown clay with blue veins due to a water deposit. This can be safely loaded to two or two-and-a-half tons per ft. super, dependent on the depth of the foundations below the surface. There are many types of sandy clay and these should not be too heavily loaded, as they easily break down in contact with water and form a very soft mixture.

Foundations in clay should never be nearer the surface than three feet, as during dry weather surface cracking of the clay occurs, and these cracks often extend to a depth of several feet. This opening of the clay in dry weather and closing in wet weather is a frequent cause of cracks in foundations and walls. For the same reason the last six inches of excavation for foundations in a clay subsoil should never be carried out until the concrete is ready to be deposited, otherwise cracks will form, and when the wet concrete is deposited general swelling and

movement of the clay will occur, thus preventing satisfactory setting of the concrete.

The permissible load on sand varies considerably. My remarks on the heaving of ballast under load and the advisability of depth applies particularly to sand. A coarse, compact dry sand at a depth of four or five feet from the surface can be subjected to a load of two to three tons per ft. super. A fine wet sand is often a doubtful proposition for half ton per ft. super. The chief danger in sand is the presence of water, as any movement of the water causes movement of the sand. This is particularly noticeable in the Lancashire coast towns, where the subsoil water and the sand ebbs and flows with the tide.

The most unstable material is silt. This very fine waterlogged sand is a water-deposited material and is found chiefly near river banks and largely in the Fen district. The country here is subject to successive floodings from the canals, and when the water drains away a deposit is left which is undoubtedly good for the crops but not for foundations. This "warp," as it is called, extends to a considerable depth, and on a site at Hull it extended to a depth of sixty feet and had a bed of peat underneath it. In cases like this the foundations should consist either of a raft or a system of piling. In the case of a raft, settlement should be anticipated, but the raft must be strong enough so that the whole structure settles equally, and the loading must be carefully balanced to avoid the liability of tipping.

In mining districts where there is a liability to local settlement of the subsoil, longitudinal reinforcement is necessary in all continuous foundations designed to span over "pot-holes" or local weak spots, and isolated foundations are also tied to the main foundations by reinforced concrete beams constructed in the ground.

The thickness of the concrete in foundations depends upon the spread or the "overhang" of the concrete beyond the brickwork, or pier above. The depth should be approximately $1\frac{3}{4}$ times the overhang of the concrete, but it can be reduced by designing the base in reinforced concrete as an inverted double cantilever, subject to an upward pressure equal to the load per ft. super brought on the soil by the superstructure.

(To be concluded)

SOCIETIES AND SCHOOLS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from the minutes of the last meeting of the R.I.B.A. Council :

Faraday Centenary Celebrations : Lt.-Col. P. A. Hopkins, F.R.I.B.A., Chairman of the Science Standing Committee, was appointed to represent the R.I.B.A. at the Institution of Electrical Engineers celebrations of the centenary of Michael Faraday's discovery of electromagnetic induction, to be held in London on September 22 and the following days.

Visit of the Council to the Soane Museum : It was decided to accept the invitation of the Curator of the Soane Museum to arrange a visit of the Council to the Museum early in the new session.

British Waterworks Association : Standing Committee on Water Regulations : Mr. H. D. Searles-Wood, F.R.I.B.A., and Major C. F. Skipper, F.R.I.B.A., were appointed to represent the R.I.B.A. on the Standing Committee on Water Regulations of the British Waterworks Association for the ensuing year.

Proposed British Standard Schedule of Unit Weights of Building Materials : Mr. L. W. Thornton White, A.R.I.B.A., and Major F. W. Rees, L.R.I.B.A., were appointed to represent the R.I.B.A. on a Technical Committee which has been set up by the British Engineering Standards Association to prepare a standard schedule of Unit Weights of Building Materials.

The Institute of Architects of Malaya : The Council formally approved the change of title of the Singapore Society of Architects to that of the Institute of Architects of Malaya and the amended Memorandum and Articles of Association.

The Nottingham, Derby and Lincoln Architectural Society : The Council formally approved the change of title of the Nottingham and Derby Architectural Society to that of the Nottingham, Derby and Lincoln Architectural Society.

Reinstatement : The following ex-member was reinstated : As Licentiate : John Waterworth.

Transfer to the Retired Members' Class : The following member was transferred to the Retired Members' Class : As Retired Fellow : Watson, Adam F. (A. 1879, F. 1905).

Resignations : The following Licentiate Members' resignations were accepted with regret : Messrs. Charles Frederick Marston, Thomas Frost May, Harold William Rogerson and Alexander Robertson.

Election of Students : The following probationers were elected as students of the R.I.B.A. :

Aikman, A. E.
Alp, W.
Armitage, H.
Atkinson, G. A. S.
Baddiley, F. O.
Barker, H. M.
Barlow, L.
Beard, P. B.
Beattie, W. H.
Beaumont, M. G.
Beecham, T. W.
Bell, M.
Bennett, H.
Benson, E. S.
Benson, J. F.
Bent, J. A.
Betts, C.
Boothroyd, E.
Bowen, H. A.
Bowman, S. D.
Brooks, A.
Burgis, N. L. S.
Butcher, H. S.
Byram, L. B.
Chase, R. G. M.
Clarke, E.
Cockett, H.
Cookson, R. E.
Cottrill, A.
Covell, R. G.
Cremer, L. B. H.
Davidson, W. L.
Davies, T. S.
Dawes, S.
Douglas, J. A.
Dugdale, M. A. S.
Edwards, L. C.
Evans, C. R.
Fardell, G. C.
Farrow, E.
Firth, E.
Fisk, W. W.
Ford, H. L. J.
Good, W. F.
Gourley, E. M. E.
Greaves, G. L.
Greenwood, J.
Gregson, S.
Griffiths, G. D.
Hammett, V.
Harley-Smith, R.
Harris, L. (jun.).
Hatton, B. E.
Hawkes, J. K.
Hayns, H. H.
Hindle, C.
Hoare, E. L. T.
Hobkinson, G. H.
Hogg, T. W. D.
Jolly, G. J.
Jones, M.
Joseph, M.
Kaye, D.
Knight, T. W.
Layfield, A. C.
Lindsay, G.
Litherland, R. S.
Mace, F. A.
McWilliams, H. H.
Margerrison, R.
Marks, L.
Mason, M.
Meeson, F. J.
Murrell, H. T.
Nicholson, W. L.
Norfolk, D. E. W.
Pack, E. V.
Paine, R. W.
Palfrey, A.
Parrott, A. T.
Penn, C. de C.
Penny, C. R.
Perry, K.
Pickford, A.
Pilling, H.
Pither, C. C.
Poppleton, W. C.
Ramsinh, K.
Raynham, J. E.
Roberts, C. W.
Sanderson, G. S.
Seabright, J. E.
Shannon, J. J.
Shannon, R. P.
Sharman, R. P.
Shelbourn, A. P.
Siggers, R. R.
Sirotkin, Z.
Smith, J. F. G.
Smith, K. J.
Somerton, G.
Stephens, D. E.
Sterling, A. W. F.
Stevenson, R. W.
Stringer, A. W.
Sturrock, A.
Sudbury, F. T.
Swann, H. G.
Thompson, P. M.
Timmons, W. H.
Tindal, S. M.
Trustam, W. J.
Upton, H. C.
Waddington, J. R.
Wallace, N. S.
Walters, H.
Ward, G.
Wardley, M. G.
Watkins, F. J. B.
Whincap, B. T.
Wilkinson, J. G.
Williams, A. C.
Winterburn, T. F.
Witham, W. J.
Womersley, J. L.
Wood, J. D.
Wood, L. C.

THE WELSH SCHOOL OF ARCHITECTURE

The Welsh School of Architecture, which has been granted the status of "Final Recognition" by the R.I.B.A., is accommodated in excellently furnished and well-equipped new studios, lecture rooms, library, etc., in the new wing at the Technical College, Cardiff.

At this college, ten scholarships, covering tuition fees and maintenance grants of £40 per annum for three years, are offered for competition annually. As candidates for entry to the Welsh School of Architecture are eligible to compete for these scholarships, they are of considerable interest to those contemplating entering the architectural profession. The scholarship examination is a competitive one, and is of about the same standard as matriculation. In the case of candidates for the School of Architecture, the subjects are :

1 : English. 2 : Mathematics, two papers—(*a*) Algebra and arithmetic; (*b*) Geometry and mensuration. 3 : History or geography.

4: Physics with mechanics, or chemistry, or higher mathematics. 5: A modern language (French, German or Welsh). *Note.*—Elementary drawing may be taken in lieu of (3) or (4) or (5), and candidates not taking elementary drawing as an examination subject must satisfy the Head of the Welsh School of Architecture as to their ability in elementary drawing from the solid and in freehand drawing.

The Welsh School of Architecture has now been at work for rather more than eleven years, under the charge of Mr. W. S. Purchon, M.A., A.R.I.B.A., the lecturer in architecture being Mr. Lewis John, M.A., B.ARCH., A.R.I.B.A., and the assistant lecturer, Mr. A. MacLean, B.A., A.R.I.B.A.

The following local architects assist in the work of the advanced course as honorary lecturers:

Messrs. Percy Thomas, F.R.I.B.A., Ivor Jones, A.R.I.B.A., T. Alwyn Lloyd, F.R.I.B.A., M.T.P.I., H. Teather, F.R.I.B.A., A. L. Thomas, F.S.I., M.T.P.I., C. S. Thomas, F.R.I.B.A., J. H. Jones, F.R.I.B.A., C. F. Jones, A.R.I.B.A., and H. Norman Edwards.

Students in the department also attend courses of instruction in the departments of engineering, technical chemistry, mathematics, physics and the school of art, all of which are housed in the same building, while special lectures on (*a*) "Geology of Building Materials"; (*b*) "Growth, Characteristics and Diseases of Timbers," and (*c*) "Law as Applied to Professional Practice," are given respectively by Messrs. F. J. North, D.SC., F.G.S. (Keeper of Department of Geology, National Museum of Wales), H. A. Hyde, M.A., F.L.S. (Keeper of Department of Botany, National Museum of Wales), and E. W. David, LL.B.

The three years' full-time day course leads to the award of the certificate, to the holders of which the R.I.B.A. grants exemption from its Intermediate Examination, while those students who successfully pass through the diploma course are exempted from the R.I.B.A. Final Examination, a special course of lectures on professional practice and a special examination in this subject being held in the school. This diploma course follows the certificate course, and consists of two sessions, the former of these being of six months' duration only, the intervening six months being spent in architects' offices.

There is also an evening atelier for architects' assistants who cannot attend the day courses.

The department is in close touch with the South Wales Institute of Architects, representatives of this body being on the Advisory Committee of the School, and students of the school are eligible for the prizes awarded by the Institute. In addition to these awards, there are a number of school prizes presented in the main by local architects.

Students of the Welsh School of Architecture have won various important scholarships of an advanced type, including a "Dovey" scholarship for post-graduate work, value £75 per annum; the R.I.B.A. Fourth and Fifth Year Maintenance Scholarship, value £100 per annum; the Archibald Dawnay Scholarship, value £50 per annum, and the Rome Scholarship in Architecture, value £250 per annum for three years.

The external examiners are Professor L. B. Budden, of the University of Liverpool, and Professor A. C. Dickie, of the University of Manchester.

The school year commences on Monday, October 6, but intending students are advised to apply at an early date for the particulars of the courses of instruction and of the entrance and scholarship examinations. Candidates for the latter should obtain application forms which must be completed and submitted by September 19.

QUESTIONS THAT ARISE

Aluminium for External Use

M. D. writes: "*Is it possible to use aluminium externally on a building in a similar manner to cast iron or bronze? Would the material need painting or cleaning at frequent intervals? If it does not, the material appears to me to have great possibilities and one wonders that it is not more used.*"

Although used more in this country for interior decorative work, in Canada aluminium is largely used for external ornaments and panels.

It is usual to employ an aluminium alloy containing silicon, which, on exposure, becomes covered with a film of aluminium oxide protecting the metal from decay. The only apparent effect of the oxide is a slight dulling of the surface. The more silicon there is in the alloy the nearer will the final colour approach to that of pewter.

To keep a polished surface it would be necessary to treat the metal with a lacquer, and of course this would have to be renewed at intervals.

One great advantage of aluminium when used with stone is the fact that rain washings do not discolour the surrounding masonry, as so often happens with bronze. LL. E. W.

Varnished Distemper

F. writes: "*I should be glad of your expert's advice regarding varnishing over distemper. Is it possible to obtain a good surface or is the distemper likely to flake off on application of the varnish? If a good job can be obtained, this would be a cheap method of decorating.*"

A good washable distemper or water-paint can be varnished without fear of flaking or blistering when the surface is thoroughly hard and dry, but it is useless attempting this work on new walls.

It could not be called a good finish for high-class work, and the application of the varnish is the most important factor towards a successful finish.

There are many grades of varnish, but good copal varnish should be specified.

The most common defects are usually the result of using a cheap varnish, having an excess of drier or lack of oil in its composition, and in brushing the work out. The varnish should be flowed on rather than brushed out.

The effect of varnishing distemper is to tend to deepen the colour slightly. Cream or light stone colour distempers do not take the application of varnish as well as other tints, and should be avoided, as they are inclined to dry out with an uneven texture.

G. E. D.

Decoration

H. writes: "*The texture effect of the decoration in many modern cinemas seems to be a coloured stucco. The effect produced is very good, and I should be interested to know how it is carried out.*"

Your correspondent is probably referring to the material known as plastic paint. The texture effect of this material can be produced almost in the same way as in external cement rendering.

The material is painted on thickly and worked up with a brush, scraper, or with the bare hand to the desired surface.

This treatment looks best when applied to a plain wall in panels to break up a large unrelieved surface.

The plastic paint must be coloured after it is set, and this is best done with a coat of ordinary internal oil paint, which must be carefully applied to cover and flow over all the irregularities.

If this coat is coloured to the highest light required in the scheme of decoration, the final glazing coat may be darker.

Before this last coat is applied it should be worked over with a cloth, which will allow the light colour of the undercoat to show on the high spots of the surface texture.

Another finish sometimes adopted in conjunction with plastic paint is colour spraying with metallic tints, gradually shading the panel from light to dark or from one colour to another.

G. E. D.

LAW REPORT

JUDGMENT RESERVED ON LEGAL POINT

Administrators of Mr. and Mrs. Bottomley v. Bannister and another. Court of Appeal. Before Lords Justices Scrutton, Greer and Romer

THIS was an appeal by Mr. George William Bannister and Mr. Walter Harris, builders, of Moyser Road, Streatham, from the verdict and judgment in an action tried before Mr. Justice Hawke and a jury, in which the appellants were sued by the co-administrators of Mr. and Mrs. Bottomley on behalf of their infant daughter, and damages in regard to their death.

The jury awarded the plaintiffs £1,700 damages.

Mr. and Mrs. Bottomley lived in Denmark Road, Carshalton, and it was alleged that they died from carbon monoxide fumes, which were said to come from a gas boiler in the kitchenette.

Mr. Powell appeared for the builders, and said the grounds of the appeal were that on the facts judgment should have been given for the defendants, and that there was misdirection both as to the law and the facts. Mr. and Mrs. Bottomley had arranged to purchase one of the appellants' houses and had gone into possession. The house was fitted with a gas boiler in the kitchenette, where there was also a linen shoot leading up to the bathroom. The fumes went up the shoot into the bathroom and were said to have caused the death of Mr. and Mrs. Bottomley.

Mr. Eastham, K.C., for the administrators, said his case was that the builders were negligent in fitting the boiler without a flue and were also negligent in making a linen shoot which opened into the bathroom.

Mr. Powell contended that at the time of the death of Mr. and Mrs. Bottomley they were tenants at will. The contract for purchase had not been completed, and therefore the legal position was to be ascertained on the principles of landlord and tenant. If he were wrong on that point, then he argued that the principle in *Bates* against *Batey & Co., Ltd.*, applied, viz., that the appellants' only duty was to give warning of a danger actually known to them.

Mr. Eastham submitted that here the case raised was not one of landlord and tenant.

Lord Justice Scrutton inquired why not bring the agreement. Mr. Bottomley was a tenant at will, as the purchase had not been completed.

Mr. Eastham replied that the liability on the part of the appellants arose apart from any contract, and observed that even a landlord was responsible for dangers he had created on the premises by any possible misfeasance.

After further legal argument, Lord Justice Scrutton intimated that the Court reserved its judgment till the Courts reassembled in October.

COMPETITIONS OPEN

September 5.—Proposed extension of the Town Hall, Hackney, for the Hackney Borough Council. Architects are invited to submit their names and brief particulars of their experiences. The competition will be limited to six architects to be selected from the applicants. Assessor: Professor S. D. Adshead, F.R.I.B.A. Premiums: £250, £150 and £100. The authors of the three unpremiated designs will receive a payment of £50 each. Applications should be submitted to R. H. R. Tee, LL.D., Town Clerk, Town Hall, Hackney, E.8, by September 5 next.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich.

THE ARCHITECTS' DIARY

FRIDAY, SEPTEMBER 4

INTERNATIONAL ILLUMINATION CONGRESS. At Glasgow. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Organization for the Development of Electric Lighting," by C. A. Atherton; "Progress and Teaching of Illumination in Italy," by C. Clerici; "Lighting Progress in South America," by A. M. Baidaff. Section 3: "The Provision of Adequate Daylight in Building Regulations," by P. J. Waldram; "Daylight Illumination and Town Planning," by C. G. Möller; "Visual Performance at Various Levels of Daylight Illumination," by K. Y. Yang; "Daylight Illumination of Art Galleries with Overhead Lighting," by T. Hirayama. Afternoon Session, 2.30 p.m. Section 1: "Home Lighting," by C. Haslett and N. E. Miller. Section 3: "Photo-Electric Measurements of Daylight Illumination by the Use of a Model Room," by Z. Yamauti and K. Hisano; "Mathematical and Graphical Determination of Direct Daylight Factors," by A. C. Stevenson; "Prediction of Natural Illumination in Interiors and on Walls of Buildings," by H. H. Higbie and A. D. Moore. **10 a.m.**

SATURDAY, SEPTEMBER 5

Sunrise, 6.17 a.m. Sunset, 7.40 p.m.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. 1 Wilbraham Place, Belgravia, S.W.1. Departure of a party of members for a fortnight's tour through Spain and the Balearic Islands. Returning on September 19. Full particulars obtainable from the Secretary.

MONDAY, SEPTEMBER 7

SANITARY INSPECTORS' ASSOCIATION. Annual Conference to be held at Bridlington. Until September 12.

INTERNATIONAL ILLUMINATION CONGRESS. At Edinburgh. Following are some of the papers to be read. Morning Session, 9.30 a.m. Section 1: "The Lighting of Seaside Resorts," by A. P. Allan and J. M. Campbell; "Mason Experiments in Street Lighting," by W. S. Stiles; "Modern Public Lighting by Electricity," by W. J. Jeffery. Afternoon Session, 2 p.m. Section 1: "The British Standard Specification for Street Lighting," by C. C. Paterson. **10 a.m.**

THURSDAY, SEPTEMBER 10

INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2: "Architectural Lighting," by L. Kalff; "Engineering Aspects of Architectural Lighting," by W. J. Jones. **10 a.m.**

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 16.

FRIDAY, SEPTEMBER 11

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. **10 a.m**

ARCHITECTURAL ASSOCIATION. Annual Excursion: to Austria. The programme will include six days in Vienna, followed by a six days' motor coach tour through Austria, returning to London on September 26.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

TUESDAY, SEPTEMBER 15

Closing date of THE ARCHITECTS' JOURNAL September Holiday Sketches Competition.

WEDNESDAY, SEPTEMBER 16

INSTITUTION OF STRUCTURAL ENGINEERS. Visit to the Shipping, Engineering and Machinery Exhibition at Olympia.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Manchester and District Branch. Visit to the Wardle (Watergrove) Reservoir.

FRIDAY, SEPTEMBER 18

NATIONAL SMOKE ABATEMENT SOCIETY. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19

Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

MONDAY, SEPTEMBER 21

INTERNATIONAL ILLUMINATION CONGRESS. Reception of the delegates at the Royal Institution, London. 3 to 4.30 p.m. **3 p.m.**

TUESDAY, SEPTEMBER 22

INTERNATIONAL ILLUMINATION CONGRESS. Conference of the Institution of Electrical Engineers, at the Kingsway Hall, W.C. 10.30 a.m. Conversaziones at the Royal Institution and the Albert Hall. 8 p.m. **10.30 a.m.**

WEDNESDAY, SEPTEMBER 23

R.I.B.A. STATUTORY EXAMINATION. Latest date for submission of applications for examination for the office of district surveyor. (Fee £3 3s.)

TRADE NOTES

A folder showing the reduction in prices of "Henley" tape has recently been issued by Messrs. W. T. Henley's Telegraph Works Co., Ltd., of Holborn Viaduct, London, E.C.1. The net prices of the tape have now been reduced twopence per pound, representing a reduction of 12½ per cent. on the largest quantity, and the net trade prices per pound, are now as follows: 56 lb. up to and including 112 lb., 1s. 2d.; 28 lb. and under 56 lb., 1s. 3d.; 14 lb. and under 28 lb., 1s. 5d.; 7 lb. and under 14 lb., 1s. 7d.; under 7 lb., 1s. 7d. All the foregoing quantities, with the exception of that under 7 lb., are supplied carriage paid throughout the United Kingdom. Tape, ½ in., ⅝ in., and ¾ in. wide is supplied in approximately ½ lb. net rolls, and 1 in. wide in approximately 1 lb. net rolls. It should be noted that the firm also supply the tape in 4 oz. and 2 oz. rolls, the prices being respectively 1d. and 2d. per lb. higher than those given above for the different quantities. These rolls are also packed in cartons. The firm state that the tape can be used for protecting rubber insulated joints and for all kinds of protective work, both interior and exterior.

*

Messrs. Benham and Sons, Ltd., of 64 Wigmore Street, W.1, have recently issued a leaflet illustrating and describing their Staybrite stainless steel sinks, draining boards and tables, all of which are made in standard sizes or varied to any requirement. The sinks are descaled finish inside and polished outside, and are complete with a 1½-in. chromium-plated standing corner waste with overflow pipe, the strainer plates being of perforated Staybrite steel. Staybrite drainers are polished on top, with draining grooves rolled in, short skirtings 1½-in. high at back, and the front and both ends turned up to form a drip fillet. The sink and drainers may be supported on enamelled cantilever supports for building into the wall, or on enamelled cast-iron legs and framing. Staybrite stainless steel tables are usually mounted on enamelled cast-iron legs, and may be fitted with galvanized or Staybrite shelves under between-legs, but, if desired, tops can be supported on enamelled cantilevers from the wall. Staybrite-fronted drawers, 24 ins. by 24 ins., with chromium-plated handles, can also be fitted. The standard sizes of the tables range from 4 ft. long by 2 ft. 3 ins. wide to 11 ft. 9 ins. long by 3 ft. 6 ins. wide.

*

Portland Cement Rendering is the title of a new booklet recently issued by the British Portland Cement Association, Ltd., of 20 Dartmouth Street, Westminster, S.W.1. It deals with the latest practice of cement rendering as a form of external decoration. The rendering is carried out primarily on concrete, brickwork, masonry, or suitable lathing. Its purpose is two-fold; it is a protective measure against the elements and it may also be used as a distinctive form of decoration. However large a part it may have to play in a scheme of decoration its main essential is to be a water-tight covering, and it must be so applied that wet cannot penetrate it to the detriment of the backing to which it is applied. The booklet covers the preparation of surfaces, materials to employ and operations, and will be sent, free of cost, on application to the British Portland Cement Association, at the address given above.

*

The possibility of danger to works of art by fluctuations of temperature has been exercising the minds of the curators and trustees of national collections for some time. A special committee has been appointed to examine the whole question, and the use of ceiling panel warming is being brought to the notice of architects, because of its low fixity of temperature. By this system the source of warmth is, it is claimed, removed as far as possible from the works of art themselves. The Mond and Duveen extensions at the National Gallery, the Courtauld Institute at the Fitzwilliam Museum, the Geoffrey Museum, and the Geological Museum are among the buildings fitted, or being fitted, with panel-warming. It has also been installed in part of Hampton Court Palace, and the historic hall of the Mercers' Company, London, is also warmed by this panel-warming system.

*

A booklet entitled *Drawing Office Progress* has been produced by the Drawing Office Material Manufacturers and Dealers' Association, of Windsor House, Victoria Street, London, S.W., for distribution at the Shipbuilding and Engineering Exhibition, to be held at Olympia from September 10 to 16. It is handsomely bound in cloth, and contains in its eighty-four pages articles on the policy of the Association, the psychology of the draughtsman and drawing office processes and equipment. A full list of the members is included. The illustrations comprise full-page photogravure pictures representative of different branches of modern engineering. There will be 10,000 copies available for distribution.

*

The British Electric Transformer Co., Ltd., announce that all remittances in settlement of accounts, and all correspondence in connection therewith, should be sent to their London office, Wellington House, Strand, London, W.C.2.

*

Messrs. W. H. Gaze and Sons, Ltd., have recently secured the following contracts: New premises at 71–73, Whitfield Street, W.1, for Messrs. Milner and Craze, B.A., L.R.I.B.A.; new shops at Woking for Messrs. Kenneth Wood and Charles A. Rose, AA.R.I.B.A.; alterations and additions to St. Bede's Church, Thornton Road, Clapham Park, for Mr. W. C. Mangan; new factory at New Malden for Messrs. A. S. R. Ley and Sons, F. & A.R.I.B.A.; "Duke of Buckingham" public-house, at Kingston, for Messrs. Yetts, Sturdy and Usher.

*

A four-page leaflet has been issued by the Stanton Ironworks Co., Ltd., of Nottingham, showing the standard special castings manufactured for the firm's stock for use with British Standard socket and spigot pipes. The diameters of the socket and spigot bends range from 3 ins. to 12 ins., and are supplied in ¼ in., ⅛ in., 1/16 in., and 1/32 in. bends; and the caps, collars and plugs range from 3 in. to 12 in. diameters. The socket and spigot tapers are manufactured in two types, as follows: Type i: (A) Barrel socket ends, 3 ins. to 12 ins. in diameter; (B) Barrel spigot ends, 2 ins. to 6 ins. in diameter. Type ii: (A) Barrel socket ends, 2 ins. to 8 ins. in diameter; and (B) Barrel spigot ends, 4 ins. to 12 ins. in diameter.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Work at Melchet Court, near Romsey, Hants. Block of four cottages (page 300). General contractors, Wm. Moss and Sons, Ltd. Sub-contractors: Bursledon Brick Co., Ltd., common bricks; Blanchards, Ltd., S. Read, Claygate Brickfields, W. T. Lamb and Sons, facing bricks; Hooper and Ashby, roofing tiles; Edmund Ware, carved stone panels. Entrance gates and lodges (Supplement). General contractors, William Moss and Sons, Ltd. Sub-contractors: Bursledon Brick Co., Ltd., common bricks; Blanchards, Ltd., S. Read, Claygate Brickfields, W. T. Lamb and Sons, facing bricks; Hooper and Ashby, roofing tiles; Bath and Portland Stone Firms, Ltd., Bath stone; Wm. Bloye, carving; Birmingham Guild, Ltd., gates. Two cottages, Landford Wood (page 300). General contractors, R. Moody and Sons. Two cottages near Main House (page 302). General contractors, R. Moody and Sons. Sub-contractors: Roberts, Adlard & Co., pantiles. Wrought ironwork door to setting for sculpture in gardens (Supplement). General contractors, F. G. Minter, Ltd. Sub-contractors: Paul Turpin, ironwork. Tennis courts (page 301). General contractors, Wm. Moss and Sons, Ltd. Sub-contractors: Emerson and Norris, artificial stone; Grassphalte Hard Courts, Ltd., tennis courts. Whiteparish Village Hall (page 302). General contractors, R. Moody and Sons.

Additions to Sanquhar Church, Dumfries (pages 303–305). J. G. Dewar, mason work; J. W. Wilson, chancel furniture, panelling and carving; H. Hilsdon, organ; C. E. Stewart, stained glass.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The L.C.C. has obtained a site in Montbello Road, ELTHAM, for the erection of an elementary school.

The KINGSTON Corporation is to erect another forty houses on the housing estate.

Mr. F. M. Kirby has prepared plans for extensions at the Freemasons Arms, Ladywell Road, LEWISHAM.

The LOUGHTON U.D.C. is to construct an open-air swimming bath in the recreation ground.

The WEST HAM Corporation is to enlarge the mental hospital at Goodmayes.

SOUTHERN COUNTIES

The Ministry of Health is to hold an inquiry into the scheme of the BOURNEMOUTH Corporation to erect a central fire station, at a cost of £17,000.

Messrs. Fox and Sons have prepared a layout for the Littledown estate, BOURNEMOUTH.

Messrs. Rumsby and Rodd are to develop a building estate in Iford Lane, BOURNEMOUTH.

The Board of Education has sanctioned the proposal of the BOURNEMOUTH Education Committee to erect a temporary school for ninety children at Kinson.

Plans passed by the BOURNEMOUTH Corporation: Stores, Malmesbury Park Road, for Messrs. Dibbens, Ltd.; stands, Dean Court, for Bournemouth Football Club, Ltd.; amended plans for Carlton Cinema, Christchurch Road, for Carlton Cinema Ltd.; extensions, Saugeen School, Derby Road, for Captain Tregonning; twelve houses, Wimbourne Road, for Mr. H. C. Barnes; shops and showrooms, Westover Road, for Mr. S. B. Parsons; two houses, Strouden Road, for Messrs. Berry and Wood; two houses Athelstan Road for Mr. C. W. Head; two houses, High Road, for Mr. C. K. Habgood; two houses, Ensbury Avenue, for Mr. S. Garrett; six houses, off Barnes Lane, for Mr. G. Chapman; three houses, Claremont Avenue, for Mr. S. G. Ward; four houses, Meon Road, for Mr. E. Reading; school boarding houses, Branksome Hill Road, for Bournemouth School for Girls; shop, showrooms and flats, Westover Road, for Mr. H. Lubelshy; three houses, Ropley Road, for Mr. C. H. White; workshop and store, Stourwood Avenue, for Mr. H. Whiting; swimming bath, shops and club, Bath Road, for Sports Pool Syndicate; hotel, Overcliffe Drive, for Messrs. H. Whiting and Son; schoolroom, Ilford Drive, for Captain Broach; four houses, Southwick Road, for Mr. A. S. Prince; three houses, Rushmere Road, for Messrs. Parsons and Richards; two houses, Ensbury Avenue, for Mr. F. F. Hawkins.

Plans passed by the HERNE BAY U.D.C.: Three bungalows, Carlton Hill, for Messrs. Goodwin and Russell, Ltd.; additions, Masonic Temple, Cecil Park, for Mr. C. W. Welby; bungalow, Grand Drive, for Mr. W. Hancock.

The SEVENOAKS U.D.C. is to erect fifty-two houses on the Mill Pond Wood estate.

SOUTH-WESTERN COUNTIES

Messrs. Samson and Colthurst have prepared plans for the erection of seventy-five houses, for the BRIDGWATER Corporation.

The BRISTOL Corporation is to erect another ten houses on the Southmead estate.

The GOSPORT Corporation is to erect 142 houses on the Privett estate.

The Devon county architect has prepared plans for the erection of a senior school at PLYMPTON.

The SWINDON Corporation has obtained sanction for a loan of £150,000 for waterworks.

Mr. M. W. Sowden has prepared plans for the erection of fifty-eight houses for the WHITCHURCH U.D.C.

EASTERN COUNTIES

The CHELMSFORD Corporation anticipates being able to erect 200 houses during the next five years, and has appointed a sub-committee to inspect likely sites.

MIDLAND COUNTIES

The ALCESTER R.D.C. has made provision for the erection of eighty-four houses, in various parishes.

The ATHERSTONE R.D.C. contemplates the erection of seventy houses.

The Stoke-on-Trent Corporation is considering the possibilities of a site in Whieldon Road, FENTON, for the erection of public baths.

Plans passed at FENTON, Staffs.: Five houses and one shop, Vivian Road, for Messrs. Bailey and Berrisford; extensions, Heron Cross Pottery, Gordon Street, for Messrs. Cartwright and Edwards.

Plans passed at HANLEY: Two houses, Felbrook Lane, for Mr. J. Withington; two houses, Chapel Street, for Mr. W. Withington; Sunday school, Chapel Street, for Primitive Methodist trustees; alterations, 4 Cheapside, for Ocean Accident and Guarantee Corporation, Ltd.; four houses, Cemetery Road, for Mr. H. Cooper; 122 houses, Holden Farm estate, for Messrs. Shenton Bros.; two houses, Werrington Road, for Mr. W. E. Hancock; two houses, Eaves Lane, for Mr. F. Rushton.

The KIDDERMINSTER Corporation is to erect fifty-eight houses on the Aggborough estate.

The KIDDERMINSTER Corporation is to proceed with the erection of baths in Castle Road.

Plans passed by the STOKE-ON-TRENT Corporation: Three houses, Gladstone Street, for Mr. J. M. Dimbleby; two houses, Gladstone Street, for Mr. James Barber; four houses, Bedford Street, for Mr. B. James; Catholic Men's Club, North Street, for Father L. V. Twiney; two houses, Branch Lane, for Mr. F. Gibson; two houses, Whalley Avenue, for Mr. J. Winstanley.

NORTHERN COUNTIES

The Scottish Motor Traction Co., Ltd., is to erect a bus garage for fifty cars at BERWICK-ON-TWEED.

The BLACKPOOL Corporation is to erect seventy-four houses on the Highfield estate.

The BOOTLE Corporation is to erect another 136 houses.

Mr. Samuel Widdows is to develop a building estate in Harpers Lane, CHORLEY.

Plans passed by the CHORLEY Corporation: Alterations, Market Tavern, Cleveland Street, for Burtonwood Brewery Co., Ltd.; hospital, Preston Road, for Chorley Hospital Governors; four houses, Millfield Road, for Messrs. J. Brindle and Sons; two bungalows, Carr Lane, for Messrs. A. Redhead and Sons; two houses, Weldbank Lane, for Mr. H. B. Moss; alterations, New Market Street, for Britannic Assurance Co., Ltd.; works, Curate Street, for Messrs. E. D. Robinson and Sons.

The HULL Corporation has purchased five acres of land near Anlaby Road and five acres of land in Vold Harbour Lane, for housing purposes.

Mr. C. Castelow has prepared plans for the erection of a kindergarten school in Belvedere Road, LEEDS.

The LEEDS Corporation has obtained sanction to borrow £102,500 for the erection of houses on various estates.

The SHEFFIELD Corporation has obtained sanction for a loan of £52,000 for the construction of 128 houses on the Manor estate.

Plans passed at SHEFFIELD: Two houses, City Road, for Mr. A. E. Tate; two houses, Bellhouse Road, for Messrs. Oxspring Bros.; two houses, Whirlow Grove, for Messrs. Dyson & Co.; two houses, Norwood Road, for Mr. J. C. Mason; six houses, Cobnar Drive, for Mr. W. C. Mander; two houses, Strelley Road, for Mr. J. Barker; two houses, Abbey Crescent, for Mr. J. V. Auckland; twenty-eight houses, Ridgeway Road, and 128 houses, Prince of Wales Road, for the Estates Committee; two houses, Halesworth Road, for Mr. D. Hurrell; four houses, Cliffe Field Road, for Mr. H. Hammett; house and three shops, Nether Shire Lane and Common Road, for Brightside and Carbrook Co-operative Society, Ltd.; six houses, Marden Road, for Messrs. Stabler, Kesteven & Co.; two houses, Boober Avenue, for Mr. T. H. Bailey; twenty-two houses, Raisen Hall Road, and 288 houses, Shiregreen Estate, for the Estates Committee.

The West Riding Education Committee has approved revised plans for the erection of a senior school at SKELMANTHORPE, at a cost of £22,500.

Plans passed by the SOUTH SHIELDS Corporation: Alterations, premises in Osborne Terrace, Berwick Street and Bertram Street, for Mr. F. W. Newby; alterations for Messrs. H. Binn, Son & Co., Ltd., at Smithy Street, for Messrs. T. A. Page and Son; twelve bungalows, Quarry Walk, for Mr. George R. Smith; alterations, premises in John Williamson Street and Gilbert Street, for Messrs. J. W. Hanson and Son.

Plans passed by the STRETFORD U.D.C.: Twelve houses, Auburn Road, for Messrs. Smith and Allcock; two houses, Vernon Avenue, for Mr. R. P. Wheeler; sixteen houses, Granby Road, for Mr. W. H. Short; pump house, Westinghouse Road, for Southern Oil Co.; works extensions, Skerton Road, for Messrs. J. and H. Patteson, Ltd.; alterations, 230 Derbyshire Lane, for Messrs. J. Duckworth, Ltd.; church hall, Barton Road, for Parish Church Council; schoolroom, St. Cuthberts, Third Avenue, for St. Cuthbert trustees.

The Lancashire Education Committee is to erect a senior school at TYLDESLEY, at a cost of £27,000.

Plans passed at TYNEMOUTH: Sixteen houses, The Quadrant, for Mr. W. Stockdale; four houses, Fern Avenue, and additions, Tynemouth Victoria Jubilee Infirmary, for Messrs. Cackett, Burns Dick and MacKellar, on behalf of the Governors; two houses, Queensway, for Mr. J. R. Wallack; two houses, Princeway, for Messrs. H. D. Burton, Ltd.; ten houses, Billy Mill Lane, North Shields, for Messrs. Dixon and Bell; eight bungalows, The Quadrant, for Messrs. Woodall and Shepherd; six bungalows, The Quadrant, for Mr. W. Moore; villas, Billy Mill Lane, for Mr. J. R. Charlton.

The Lancashire Education Committee has purchased a site at ULVERSTON, for the erection of a senior school.

The WAKEFIELD Corporation has asked their housing architect to proceed with the preparation of plans for the baths scheme.

The WAKEFIELD Corporation has voted £19,000 for the construction of a maternity home at Manygates Park.

The West Riding C.C. is acquiring land for the extension of the public assistance institution at WAKEFIELD.

The WAKEFIELD Education Committee has approved an estimate of £8,000 for the extension of the technical college.

The WAKEFIELD Corporation has purchased a housing site of fourteen acres of land in Alverthorpe Road.

The WAKEFIELD Corporation is to erect eighty-eight houses for rehousing purposes in the New Street area.

The WALLASEY Education Committee is to erect an elementary school in Gorsedale Road, from plans prepared by Messrs. Quiggin and Gee.

The Warrington Co-operative Society, Ltd., is to erect premises in Sankey Street, WARRINGTON.

The WORSELEY U.D.C. is to erect seventy-two houses in Brackley Street and fifty-four in Burch Road.

WALES

The Cardiganshire C.C. has asked Mr. J. Lewis Evans, the county architect, to prepare plans for extensions at the ABERYSTWYTH isolation hospital.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A2	Atherstone	Mid. Counties	1 5	1 0½
B1	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0*
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0½
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A2	Bewdley ..	Mid. Counties	1 5½	1 1½
B2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0½
A2	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood ..	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B2	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A1	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B2	Brixham ..	S.W. Counties	1 3	11½
A2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A	Crewe ..	N.W. Counties	1 5½	1 1½
A2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11½
A2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11½
A2	Driffield ..	Yorkshire	1 5	1 0½
A2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	*1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0½
A2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1½
A2	Goole ..	Yorkshire	1 5½	1 1½
A2	Gosport ..	S. Counties	1 5	1 0½
A2	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11½
A2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0½
B2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1½
A2	Kidderminster	Mid. Counties	1 5½	1 1½
B2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11½
A2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1½
B2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0½
A2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1½
A	Skipton ..	Yorkshire	1 5½	1 1½
A2	Slough ..	S. Counties	1 5	1 0½
A2	Solihull ..	Mid. Counties	1 5½	1 1½
A2	South'pton	S. Counties	1 5	1 0½
A2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1½
A2	Wellingborough	Mid. Counties	1 5½	1 1½
A2	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A1	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1½
A2	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers. . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* ,,	1 0 0
,, Buffs and Creams, Add ,,	2 0 0
,, Other Colours ,, ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Pine, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, 1" . . . Sq.	1 1 0
,, 1¼" . . . ,,	1 3 6
,, 1½" . . . ,,	1 5 6
,, 1¾" . . . ,,	1 11 0
,, 2" . . . ,,	1 15 0
Deal matchings, 1" . . ,,	16 0
,, 1¼" . . ,,	17 6
,, 1½" . . ,,	1 6 0
Rough boarding, 1" . . ,,	18 0
,, 1½" . . ,,	1 0 0
,, 1¾" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅛"	¼"	⅜"	½"	⅝"	¾"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6		
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6		
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –		
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –		
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –		
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –		

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	50
Water . . . 58½	,, water	45
Steam . . . 55	,, steam	40

FITTINGS.

Per cent.		Per cent.
Gas . . . 57½	Galvanized gas	47½
Water . . . 52½	,, water	42½
Steam . . . 47½	,, steam	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 9
,, ,, ½" . . . ,,	9 6
,, ,, ⅜" . . . ,,	9 0
,, ,, ¼" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	3" s. d.	4" s. d.
	F.R. 7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets ,,	4 0	6 3
Plinth bends, 4½" to 6" ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal	F.R. 5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . . F.S.		3½
,, ,, 26 oz. . . . ,,		4½
Arctic glass . . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 3
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12" deep and cart away . . . Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away . . Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away . . "	11 0
" " 10' 0" deep and cart away . . "	11 6
" " 15' 0" deep and cart away . . "	12 0
If in stiff clay . . . . . add "	3 0
If in underpinning . . . . . " "	5 0
Digging, return, fill and ram . . . . . "	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
" " to pier holes . . . . . "	6
" " to trenches . . . . . "	6
" " extra, only if left in . . . . . "	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . "	1 13 6
" " " (4-2-1) . . . . "	1 18 6
" " " underpinning . . . . "	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER

	4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
" junctions . . . . . "	3 9	4 6
Gullies and gratings . . . . . "	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
" " in cement . . . . . "	34 0 0
" Stocks in cement . . . . . "	41 10 0
" Blues in cement . . . . . "	62 0 0
Extra only for circular on plan . . . . . "	3 0 0
" backing to masonry . . . . . "	2 0 0
" raising on old walls . . . . . "	3 0 0
" underpinning . . . . . "	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . "	1 0
" red brick facings . . . . . "	1 6
" blue brick facings . . . . . "	1 9
" glazed brick facings . . . . . "	4 6
Tuck pointing . . . . . "	10
Weather pointing . . . . . "	4
Slate dampcourse . . . . . "	1 0
Vertical dampcourse . . . . . "	1 3

ASPHALTER

	s. d.
½" Horizontal dampcourse . . . . . Y.S.	5 6
½" Vertical dampcourse . . . . . "	7 6
½" paving or flat . . . . . "	5 6
1" paving or flat . . . . . "	6 6
1" × 6" skirting . . . . . F.R.	1 0
Angle fillet . . . . . "	2
Rounded angle . . . . . "	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . "	15 6
Artificial stone and do. . . . . "	16 6
York stone templates, fixed complete . . . . . "	14 0
" thresholds . . . . . "	16 0
" sills . . . . . "	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10" . . . . . Sqr.	4 5 0
Do., 18" × 9" . . . . . "	4 2 0
Do., 24" × 12" . . . . . "	4 12 0
Westmorland slating, laid with diminished courses . . . . "	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course . . . . . "	4 0 0
Do., all as last, but of machine-made tiles . . . . . "	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
" to stanchions . . . . . "	1 0
" to staircases . . . . . "	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . "	6 9
" " roofs . . . . . "	8 3
" " trusses . . . . . "	9 0
" " partitions . . . . . "	12 0
½" deal sawn boarding and fixing to joists . . . . . Sqr.	1 17 6
1" " " " " . . . . . "	2 1 6
1½" " " " " . . . . . "	2 7 6
1½" × 2" fir battening for Countess slating . . . . "	12 6
Do. for 4" gauge tiling . . . . . "	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
" " " 2 " . . . . . "	3 0
" " " 3 " . . . . . "	3 6
Stout herringbone strutting to 9" joists . . . . . F.R.	1 0
1" deal gutter boards and bearers . . . . . F.S.	1 4
1½" " " " " . . . . . "	1 8
2" deal wrought rounded roll . . . . . F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
½" do. . . . . "	3 4 0
¾" do. . . . . "	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1½" do. . . . . "	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½" deal moulded sashes of average size . . . . . F.S.	2 0
2" " " " " . . . . . "	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete . . "	4 3
2" " " " "

ENTRANCE GATES AND LODGES

AT MELCHET COURT Nr. ROMSEY, HANTS

WROUGHT IRON SETTING FOR SCULPTURE

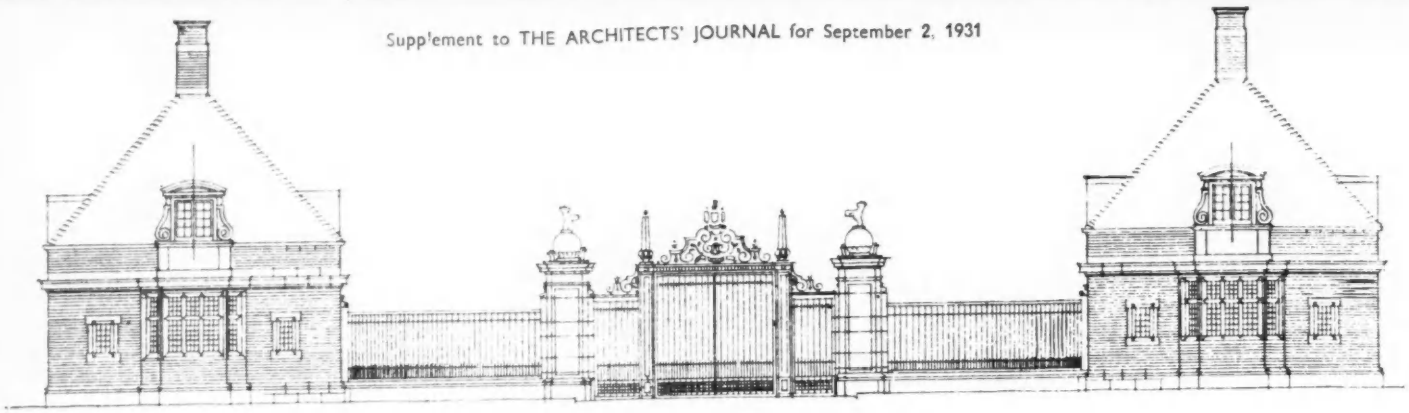
[*Buckland and Haywood, Architects.*

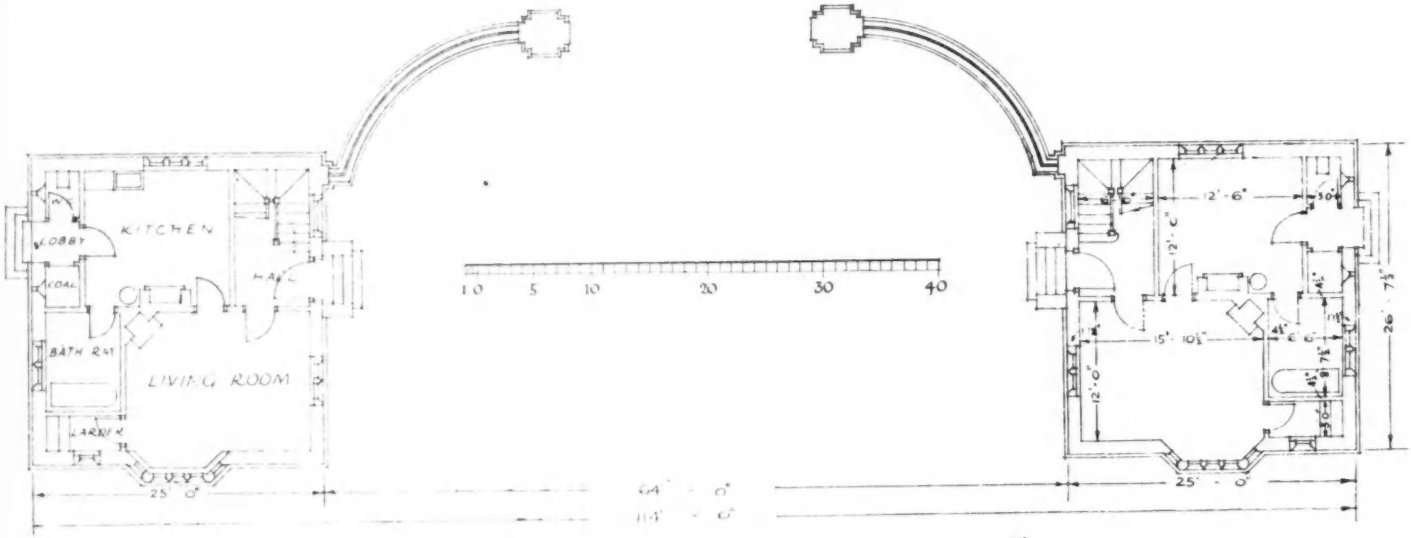
THE LANDFORD ENTRANCE GATES AND ONE OF THE TWO ADJOINING LODGES

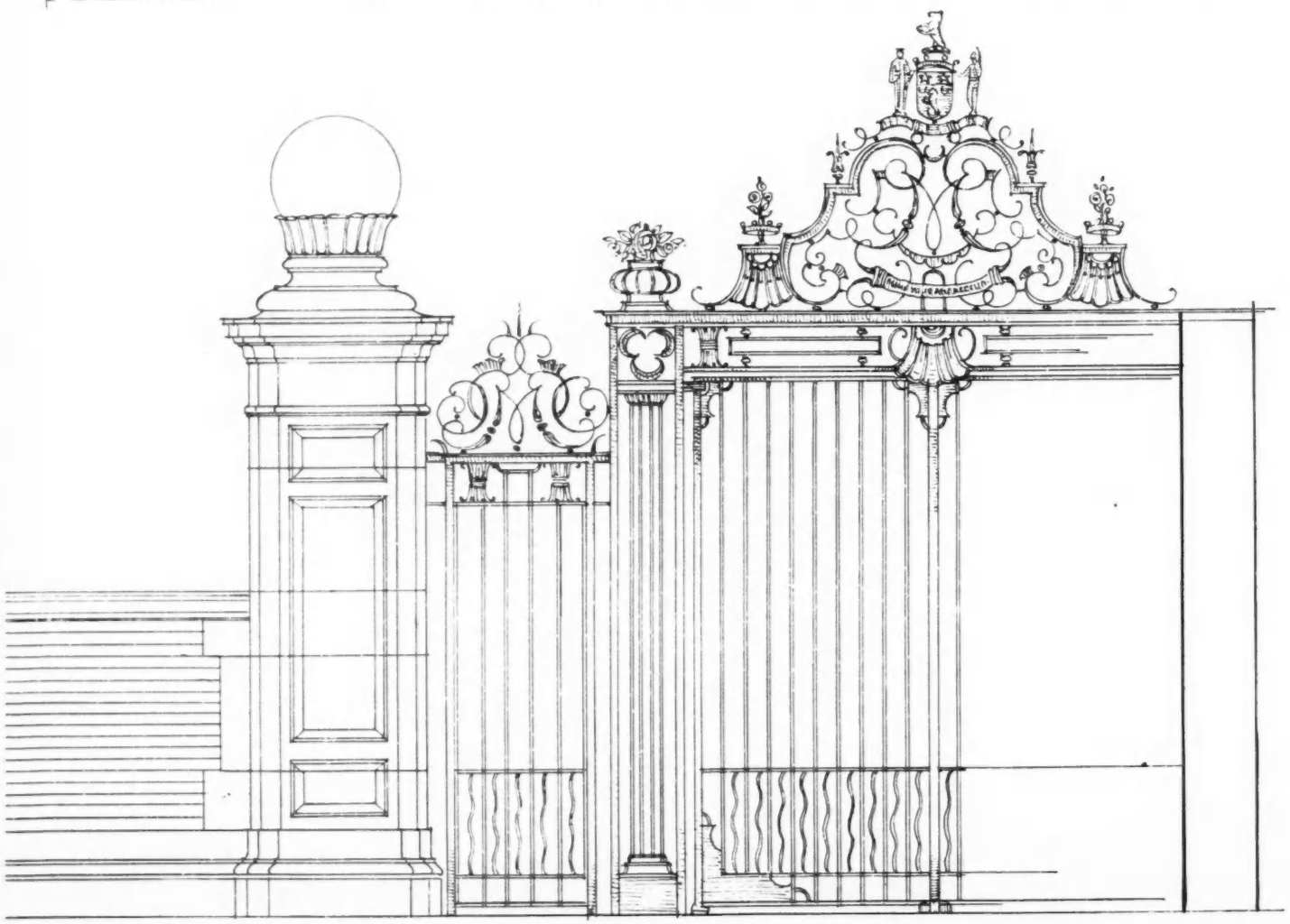
THESE gates and lodges, the architects' detail drawings of which appear overleaf, are situated at the main entrance to Melchet Court, and were specially designed for the late Lord Melchett. The former are a fine essay in the handling of wrought iron, and the design is fresh and full of character. The piers are in Bath stone and were carved by William Bloye.

On either side of the gates is a lodge, two stories high, each containing, on the ground floor, a kitchen, living-room and bathroom, and, on the first floor, three bedrooms. The lodges and dwarf walls are carried out in multi-coloured facing bricks with Bath stone dressings; and the roofs are covered with hand-made, sand-faced tiles.

Illustrations of other work recently completed at Melchet Court appear elsewhere in this issue of "The Architects' Journal."







For photograph and description, see preceding page.]

1 0 1 2 3 4 5 10 15

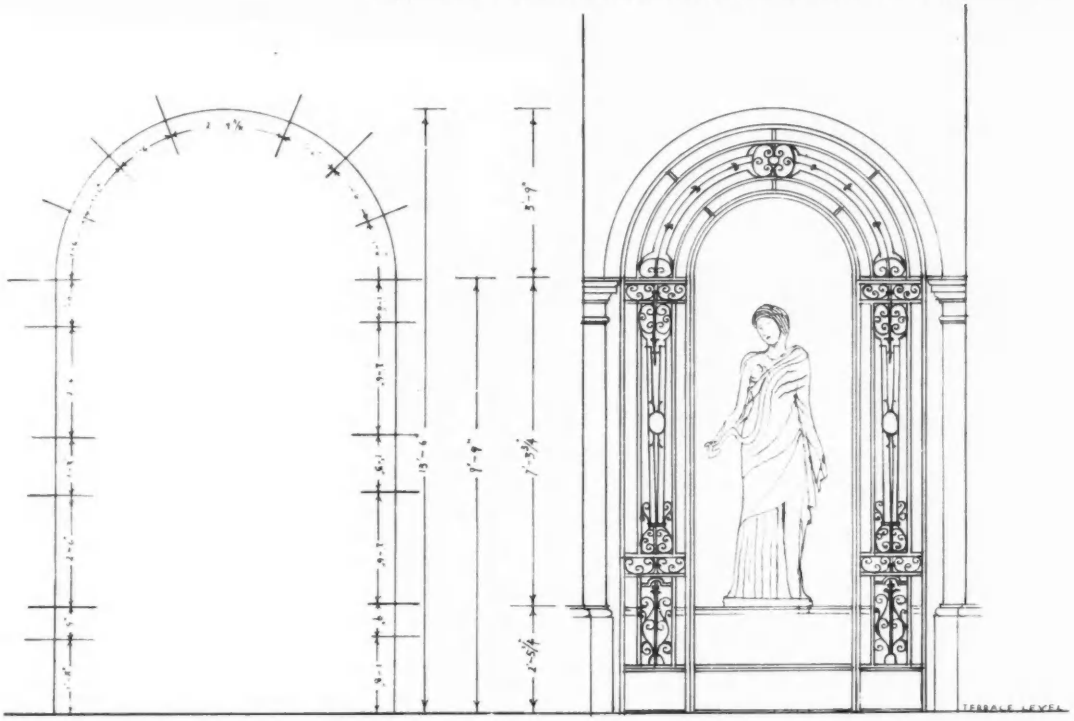
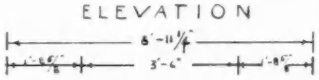
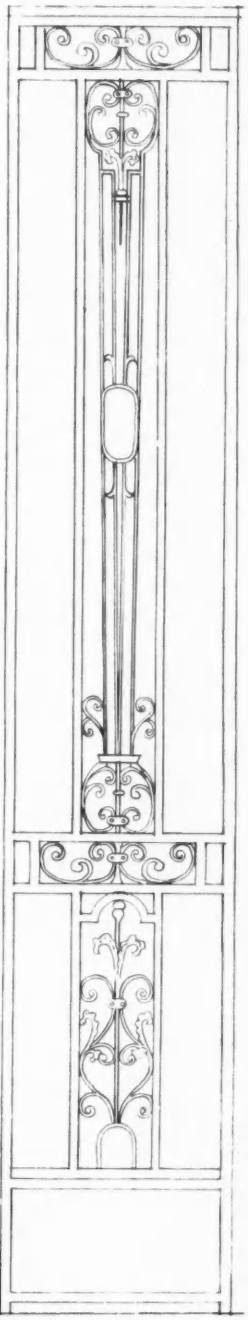


DIAGRAM SHOWING STONE JOINTS TO EXISTING MASONRY TO BE REPEATED IN NEW STONE FRAME

ELEVATION

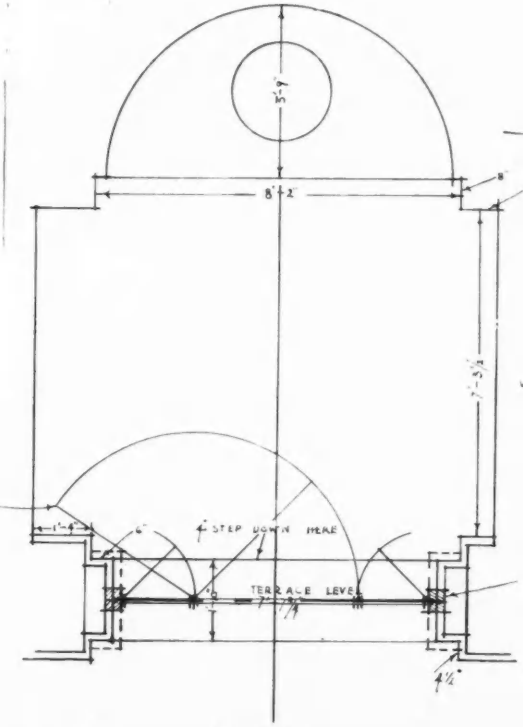




— NOTE —

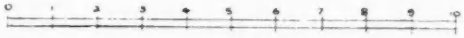
ALL IRON WORK TO BE TO APPROVED GREEN FINISH MAIN SUPPORTS AND FRAME TO BE 7/8" SQUARE WITH 1/4 PLATE GLASS BEHIND THE WHOLE SIDE PANELS TO OPEN FOR CLEANING PURPOSES

DETAIL OF SIDE PANEL — SCALE



PLAN

SCALE —



BUCKLAND & HAYWOOD. F.F.R.I.B.A. 10 STAPLE INN W.C.1.

[For photograph and description, see following page.

[*Buckland and Haywood, Architects.*

A SCULPTURE SETTING AT MELCHET COURT

THE wrought-iron glazed doors, a photograph of which appears above, while the architects' detail drawings are reproduced on the preceding page, have been executed with a martele finish and are designed as a setting for a piece of sculpture, the Greek goddess Hygieia, which stands in a garden house adjoining the main building of Melchet Court. They are as fine an essay in the handling of wrought iron and as full of character as the entrance gates and lodges, illustrations of which are given on the first two pages of this supplement.

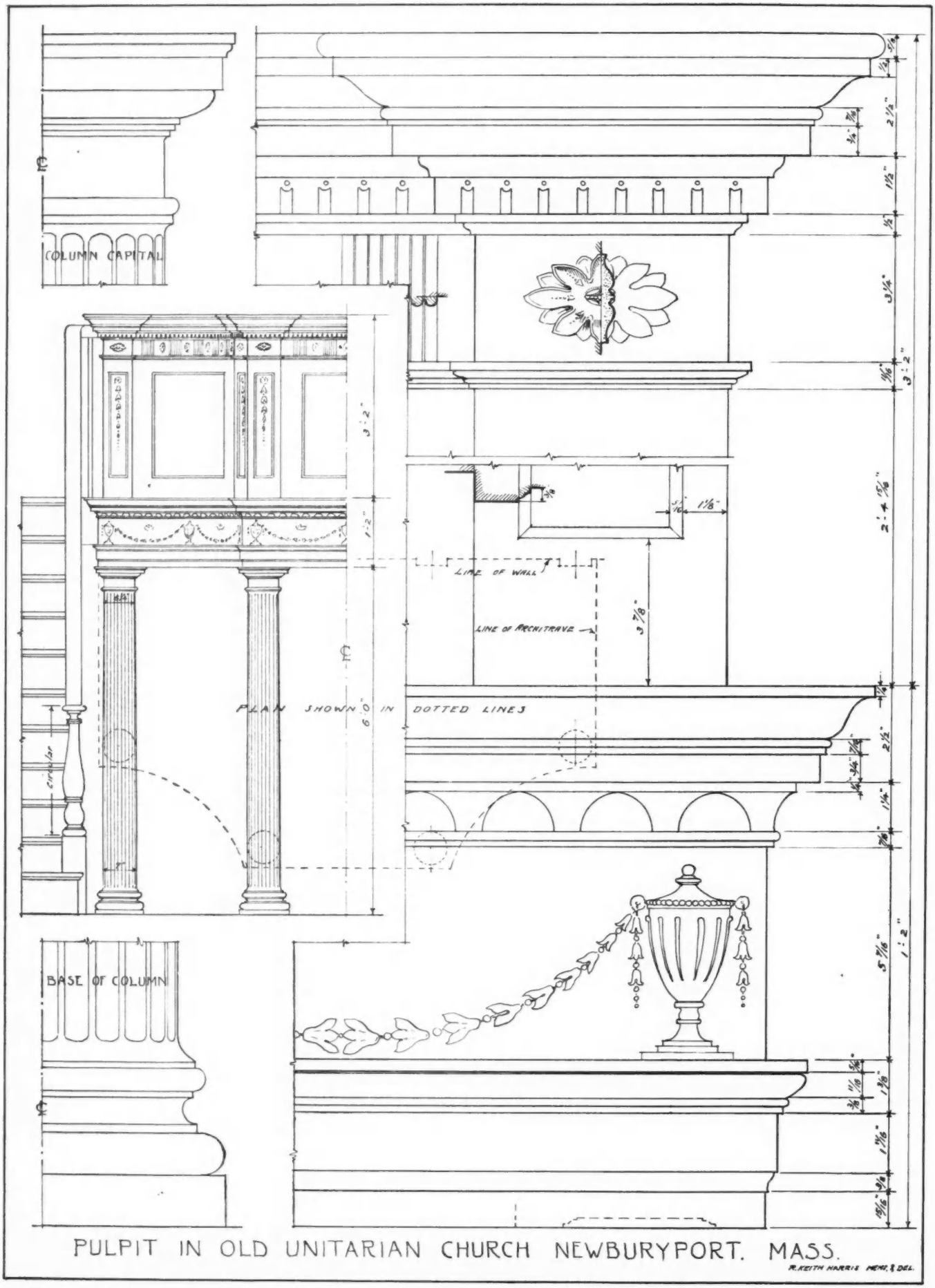
FROM THE NEW WORLD: 2

MEASURED DRAWINGS OF TWO AMERICAN COLONIAL CHURCH DETAILS

PULPIT IN THE OLD UNITARIAN CHURCH, NEWBURYPORT, MASS.

IT would be difficult to find in the small-town churches a more delightful example of the period than this pulpit. Design, proportion, detail and workmanship are equally worthy of more than passing interest. The design—obviously of Adam influence—is in harmony with that of the whole interior with its old box pews. An interesting note is provided by the contrast of the polished mahogany newel and handrail.

The details shown on the measured drawing on the following page are reproduced to scales of $\frac{1}{2}$ in. = one foot, and approximately one-third full size respectively.



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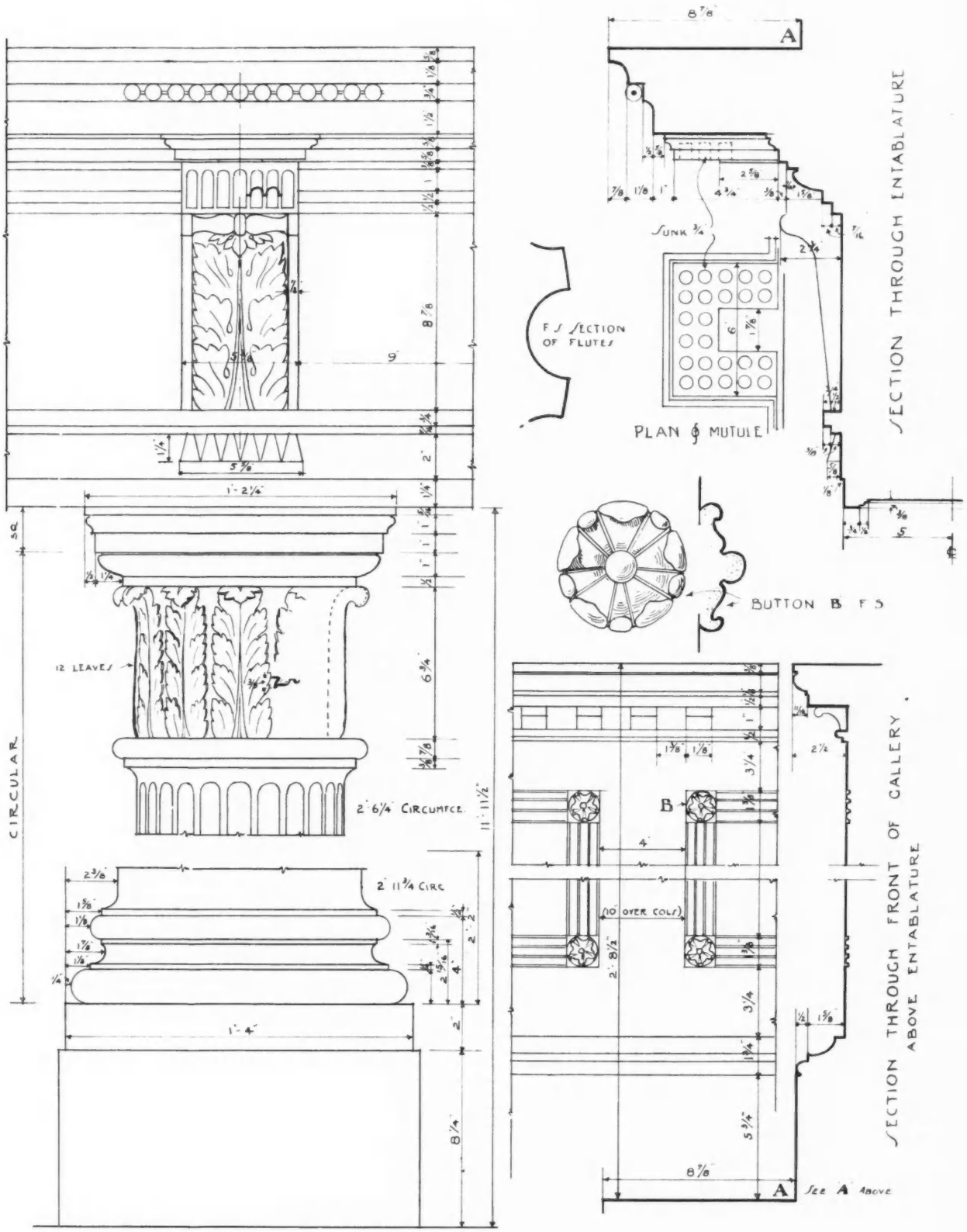
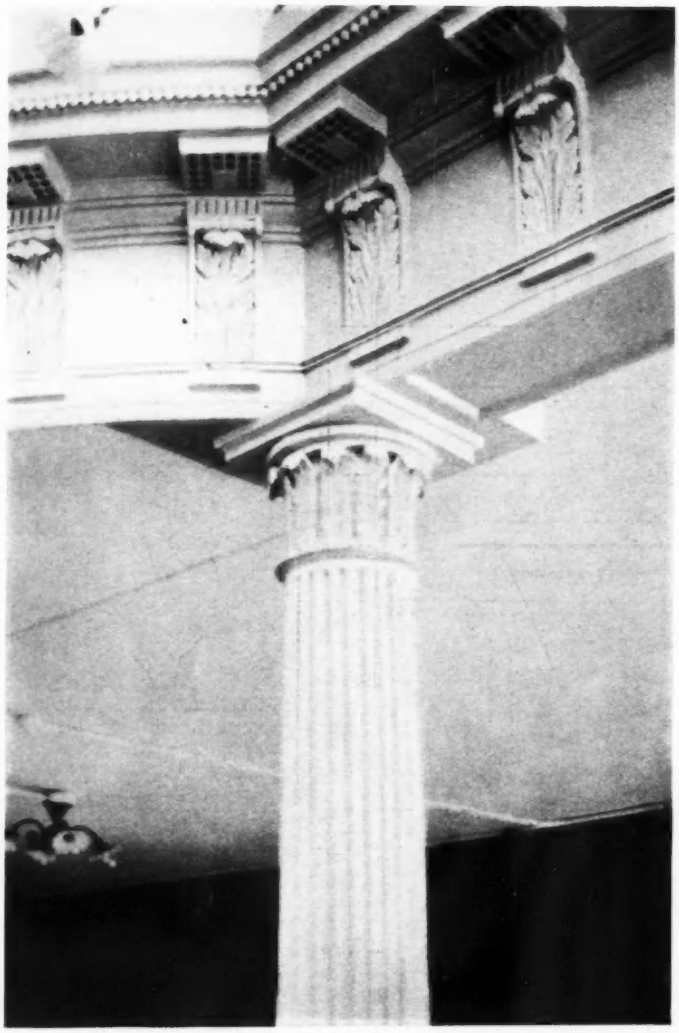


ORDER TO GALLERY
OLD WEST CHURCH BOSTON MASSACHUSETTS

R. KEITH HARRIS MEM. S. DEL.

[For photograph and description, see following page.



GALLERY ORDER, OLD WEST CHURCH, BOSTON, MASS.

THE Order supporting the gallery in this old church, a measured drawing of which is reproduced on the previous page to a scale of approximately one-sixth full size, shows the ingenuity displayed in translating external classic detail for internal purposes. The substitution of sinkings—made with an auger—for guttæ in the mutule is at once apparent, and is moreover an effective method of obtaining accentuation at these points since the even, reflected light of an interior robs the entablature of that deep-shadow relief which it would have if used externally. It is, in addition, a logical treatment for wood. The careful design of the other members is also evident.

SELECTED PRECEDENTS:

FOUR SHOPFRONTS WITH TRADITIONAL SMALL PANES

THESE four examples, taken from different parts of the country, illustrate the use of the traditional small panes of glass in the show windows of old shops. From the view-point of design, where the shop front is wedded to a dwelling-house, the custom has its advantages in maintaining homogeneity of appearance and continuity in scale. At the same time, where the goods displayed are of small dimensions, the division of the window space by the glazing bars, so far from being a disadvantage—obstructing the view, as the common criticism goes—provides, as it were, a series of little frames which, by securing a partial isolation, enhance the value and importance of the goods.

The saddler's shop (figure 4), from Cerne Abbas, successfully negotiates the difficulties of a corner site. With the exception of the unfortunate lettering above the door, this little shop front is in its original condition. The wide doorway extends an open invitation, whilst the outward-curving windows give just the right hint of a well-stocked interior.

The ancient beershop at Chiswick (figure 3) and the little fruiterer's shop at Chipping Campden (figure 2), with their simple sashed windows, are models of sober hospitality and reticence.

At Tunbridge Wells (figure 1) we are neither surprised nor disappointed by the elegant sophistication of the tobacconist's shop in the Pantiles. Imagination may play its part, but cigarettes are always more delightful when bought in so elegant an emporium. J. B.

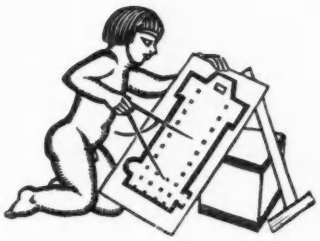
1. *AT TUNBRIDGE WELLS, KENT*

2. *AT CHIPPING CAMPDEN, GLOS.*

3. *AT CHISWICK, W.*

4. AT CERNE ABBAS, DORSET.

THE ARCHITECTS' JOURNAL



WEDNESDAY, SEPTEMBER 9, 1931

THE FUTURE OF LIGHT

AT nine o'clock on Tuesday of last week, on the first stroke of Big Ben, Britain switched on a great flood of national illumination, which revealed for the first time the architecture of our cities in a manner never before witnessed by the people of this country. London, the city of darkness, was transformed into a city of light : many prominent buildings, ancient and modern, forgot their age in donning dresses of many colours, fashioned by their designers—the illuminating engineers.

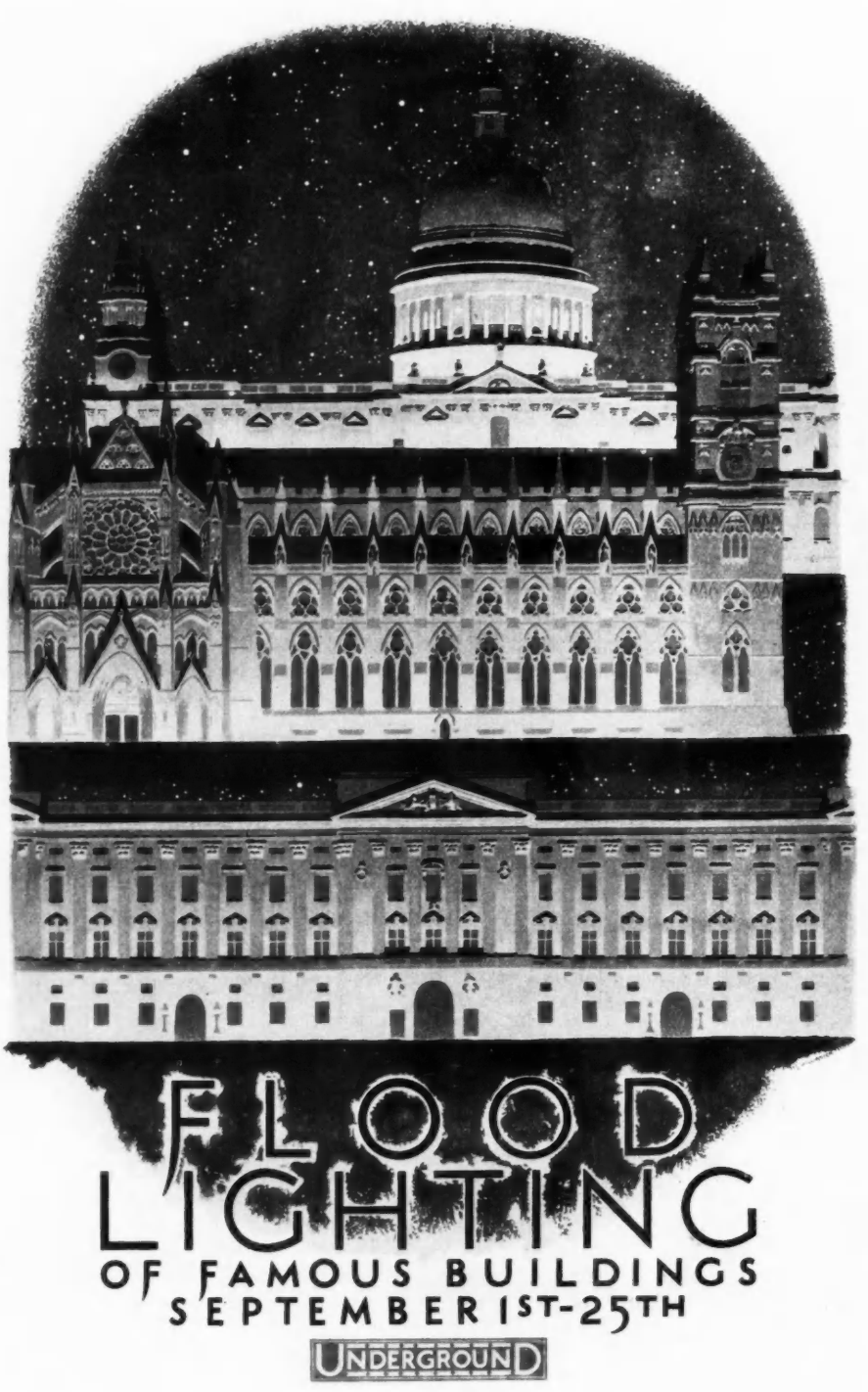
Hundreds of thousands of people flocked to the metropolis to see for themselves the new London. And they were not disappointed. The face of Big Ben, imbued with a healthy blush, looked down with pride on the illuminated Houses of Parliament and Westminster Abbey. Standing in the Mall, one saw in the distance Buckingham Palace bathed in a sea of marble-white and softened light, with St. James's Park on the left, a wide stretch of landscape, with its lake and stately trees flooded with light. Along the Victoria Embankment the long façade of Somerset House stood out boldly, garbed in a dress of rose-pink. The Tower of London guarded the entrance to the sea, clothed in glittering armour. The National Gallery, St. Martin-in-the-Fields, the County Hall, Thames House, the Admiralty and other buildings all stood resplendent in their new garb. St. Paul's Cathedral rose up like a sentinel of the night, with the illuminated spire of St. Bride's near-by. North, south, east and west, in the provinces as well as in London, the same story of light is being told, but will finish—like all stories must—at the end of this month.

The story, however, will have a happy ending. First, the several hundred delegates from twenty different countries, who are here in Britain in order to participate in the International Illumination Congress, will return to their native lands with a higher opinion of our architecture as a whole, than otherwise would have been possible, if the floodlighting of our buildings had not taken place. Gathering to celebrate a festival of light, these men were confronted with the fact that light requires an object before it can be seen and enjoyed. Indeed, until it has found something to fall upon, their light could hardly be said to exist at all. It thus became necessary for our engineers to look round for an object to gather and respect the rays of their far-flung line of lamps. Their choice—inevitably, an architect will say—fell upon architecture. And so the festival of light became a festival of architecture as well, but one so nicely compounded that few among the admiring crowds could tell which of these two was the source of their enjoyment.

Secondly, one of the most important features of the Congress are the papers that have been, and are to be, delivered by both English and foreign delegates. Those given at Glasgow on Friday last [extracts from which are given elsewhere in this issue] serve to prove the enormous advantage to be gained by all those connected with lighting throughout the world pooling their knowledge to advance the science of light. Illumination is still in a state of evolution; what science has in store for us only time can tell; it might even, in the words of Sir Hugo Hirst, speaking at the Congress dinner, held on Wednesday last, " hold the possibility of the reunion of the two great industries of gas and electricity."

It would appear that the architect has a new duty to his client imposed upon him, namely—that of providing in the case of commercial buildings at least—for the floodlighting of the structure after its erection. The advantages of this form of publicity are manifest, and the designer of the building will be wise to scheme his conception so that it may look equally well both by daylight as by artificial light. This will probably involve a reconsideration of his materials and his mouldings, that they may yield satisfactory effects under both conditions.

Floodlighting at present is often an afterthought, the architect must see to it that in the future it becomes an integral part of his scheme.



BUCKINGHAM PALACE, THE ABBEY, AND ST. PAUL'S

A reproduction, approximately one-fifth full size, of the poster by H. S. Williamson, issued by the Underground Railways to mark the floodlighting of prominent buildings in London during the International Illumination Congress this month. Buckingham Palace is seen in the foreground; above is Westminster Abbey, surmounted by the dome of St. Paul's.

NEWS & TOPICS

THE ECONOMY MANIA

IN the leading article published last week in THE ARCHITECTS' JOURNAL, reference was made to the decision of the Southwark Borough Council to postpone indefinitely the building of the projected new block of municipal offices which is so urgently needed if the administration of the borough is to be efficiently carried out. Following upon that, a long series of similar incidents have occurred, in which municipalities have determined to make sensational cuts in their expenditure.

*

The Borough of Cambridge, for instance, which had contemplated the rebuilding of its Guildhall at a cost of £100,000, will now postpone consideration of the scheme until better times. At Rotherham, where a site had been found for a new Employment Exchange, the project has been abandoned, for even before the political crisis and the formation of the National Government, Miss Margaret Bondfield had stated that it was necessary to reduce the vote for employment exchange premises, and this applied not only to Rotherham, but to many other municipalities besides. In Manchester, a committee of seven members of the City Council has just reviewed every department of municipal expenditure, and produced a list of forty-five recommendations for economy. It is assumed that the financial crisis will be of long duration, for the City Council is being urged to postpone projected schemes involving further outlay, to close down unremunerative enterprises, and to reduce prospected developments for the next five years. Sir William Davy, the Labour leader, opposed the motion on the ground that the independence of the spending committees was too severely infringed by the recommendations of the Economy Report.

*

In South Wales, where extensive schemes for the construction of new roads or the improvement of existing highways have already been started for the relief of unemployment, there is little doubt that in the very near future steps will be taken substantially to reduce all commitments for the spending of public money. In Plymouth, a number of big development schemes will be postponed indefinitely, including the construction of Central Park, and of a big central bus station, the need for which has been strongly urged by the Western Area Traffic Commissioner. In Derby, where a site was being cleared in the centre of the town for municipal offices, police station, the law courts and bus station, the erection of these new buildings will be indefinitely delayed. At Watford, it was decided not to proceed with the "Five Years Plan" for housing, which included slum clearance and re-housing, necessitating the expenditure of £300,000.

PROFITS IN SPITE OF DEPRESSION

Fortunately, there are signs that the Government itself, while naturally gratified at the quick response to its appeal for public economy, does not favour the entire cessation of necessary works of social reconstruction, and it may be hoped that in a few weeks, when the present panic is over, many of the municipalities will feel justified in resuming the greater part of their building activities. Meanwhile, it is gratifying to learn that many industries, in spite of the general financial depression, are able to make substantial profits, and especially is this the case when the industries in question have had the enterprise to advertise extensively.

AN AMERICAN'S ADVICE

Mr. Gilbert Hodges, the President of the United States Advertising Federation, has recently been talking to British advertising men on this very subject, and he produced facts and figures to prove that where a manufacturer is able to offer an article which is not only of sterling worth, but has also a touch of novelty, it will well repay him to advertise its merits. Mr. Hodges advocates "sound thinking, smart advertising, and aggressive selling"; he quotes a number of instances to show that large and increased profits have been made during the last year by a number of American companies which have refused, as far as their own businesses were concerned, to regard a "slump" as inevitable. This should surely be comforting news for those engaged in the building industry and the manufacture of household equipments. It is largely a matter of psychology, and if, instead of yielding to the depression, we stand up against it, happy results may follow, and not least in the case of the building industry, where there is so much inventive resource, and where architects and their clients take such a lively interest in new inventions which further the science and art of building and the comfort of the home. And architects would especially like to hear of new materials and processes which, while serving their purposes efficiently, result in an economy of building costs.

SAFEGUARDING THE DORSET COAST

Holidaymakers to Bournemouth or East Dorset should certainly make a point of studying recent developments in Poole Harbour. Owing to the foresight of a small group on the Poole Borough Council, there is control over the elevations of boathouses, and steps are being taken to demolish the disfiguring shacks, which have been allowed to be erected during the last twenty years. If the Dorset County Council favour the proposals put forward that the Islands of Brownsea and Fuzzy Isle should be included in the Borough under their extension schemes, it is likely that more drastic control over new building will be exercised so as to safeguard one of the most unspoilt and beautiful corners of Dorset.

MODERNIZING—WITH APOLOGIES

Post offices are to be modernized. It is about time they were, for so long as post office blotting paper was a reflection of its surroundings the public paid dearly for the stamps it bought. The announcement of impending changes has been made with many apologies, as though it were unnatural to expect post offices to be up to date; but in point of fact many of them *are* up to date already, especially new ones in suburbs and country towns. The Office of

Works, in a pompous sort of way, *does* do its best, but the type of modernization that I should like to see would spell revolution in Whitehall. Let us therefore give thanks for brighter blotting paper, and forbear to carp.

IF THAT CINEMA IS BUILT !

There is much talk of preservation, but most of it is still talk. I was recently in Truro, a city whose relics, in splendid town houses and interesting quayside buildings, unheeding citizens have not yet entirely destroyed. They have done their best, goodness knows, for the most interesting of these old houses is plastered over with the signs of the city printers' making, and the rest look neglected. The river, which could double the attractiveness of the town, is cold-shouldered, and the port has little share in the picture.

*

But much worse than this is the projected fate of Lemon Street. This invaluable street, which the sketch reproduced below does not flatter, was the outcome of Late Georgian expansion. Running from the city's centre, it sweeps boldly up the hillside, the cupola, a belt of great trees, and a good commemorative column—invisible until you near the top—all serving to mark the summit. As always, this architectural period has found favour with professional men, and Lemon Street is sacred to doctors, dentists and architects. This noble street is to be destroyed. About half-way up on the right-hand side a notice foretells the building of a super cinema !

*

If that cinema is built, Truro, which the zeal of Bishop Benson enriched with a beautiful cathedral, will have reason to be ashamed of itself, for Lemon Street, unaltered as it stands today, is one of its chief treasures.

A BUTTRESS AGAINST VULGARITY

It is gratifying to know that public spirit has helped to restore the unity of Charlotte Square, Edinburgh. This particularly fine example of the urban domestic architecture of Robert Adam had, during the years, suffered by trifling alterations, which, taken in the aggregate, served to destroy the unity of the original design. These alterations have been made good so that the north side of the square preserves its unbroken line.

*

The possession of such a work intact is, as in the case of Truro, a substantial buttress against the sea of vulgarity that threatens us, as it is a means whereby we shall be restored to a sure taste for good architecture.

FACTORY WELFARE

Excessive noise in the factory produces unnecessary physical fatigue in the worker, and factory welfare inspectors have long urged the silencing of machinery as a factor of increased production. Now the subject has been treated scientifically, and Dr. Kaye, in *Nature*, has given the results of his experiments. The intensity of noise is measured in decibels, and a clap of thunder registers 65 decibels, equal to the noise of a dog bark. A Bengal tiger at 15 ft. distance (presumably behind bars) registers 75 decibels, while the pneumatic drill of the London streets registers 90 decibels. Dr. Kaye does not say that these instruments of nerve-torture seldom work singly, and a battery in full blast will probably do better than 90 decibels. However, the New York correspondent of *The Times* promises relief, for he has inspected a new invention of Mr. Hiram Maxim. This is an instrument to exclude street noises from houses. It consists of a box which rests on the window cill, with the sash closed upon it. While admitting about 500 cubic feet of air per minute, it excludes all street noises, even those of the pneumatic drill. The one drawback to this little invention is the fact that it is not quite silent itself, but emits a contented hum like the drone of a ventilating fan. ASTRAGAL

Lemon Street, Truro, which, as Astragal points out in a note on this page, it is proposed to disfigure by the erection of a super cinema.

FELSTED SCHOOL: THE NEW GRIGNON HALL

DESIGNED BY CHETWOOD AND GRANT

The north-east front: the green room story and the cloister connecting it with the classrooms are seen in the foreground. Hand-made, multi-coloured stocks have been used for the facings; and purpose-made moulded brick mullions and transoms for the windows. The roof is covered with hand-made, sand-faced tiles.

FELSTED, one of the oldest of our public schools, was founded in 1564, by Richard Lord Riche, Lord Chancellor of England, whose estate, Leez Priory, is situated some two miles from the school buildings.

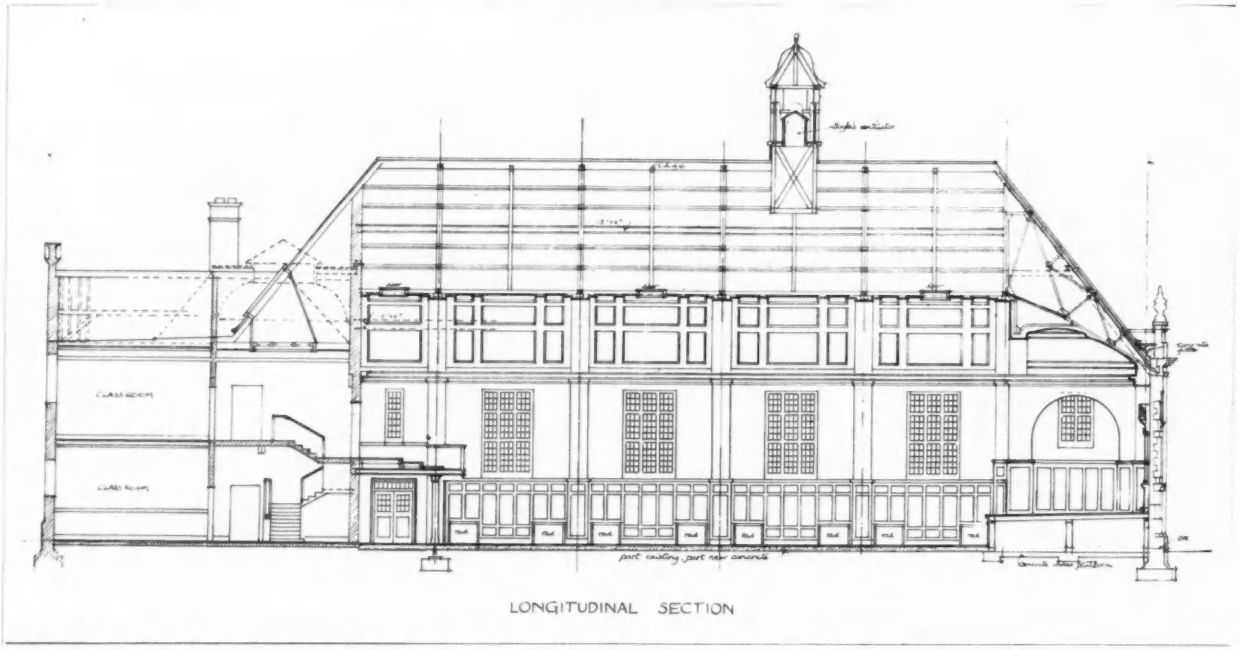
The new great hall, which was opened recently by Mr. S. A. Courtauld, the Chairman of the Governors, has been built to replace the original Grignon Hall, which was destroyed by fire in March, 1930.

The present building occupies a portion of the site of the old hall, but is considerably larger, and has certain special features which will be described later.

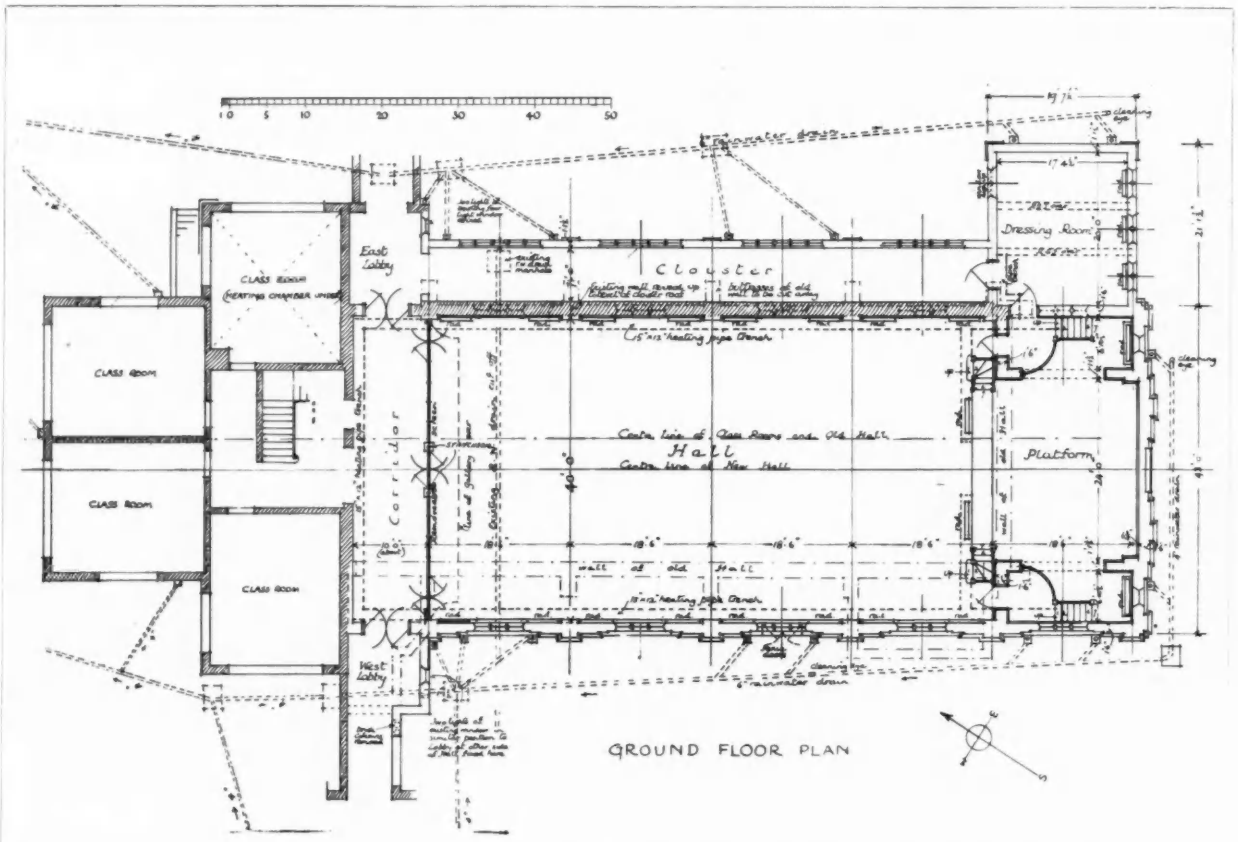
The problem to be solved was to provide a hall which, while still retaining the character of a school hall, should, at the same time, be adaptable for dramatic performances. A green room is placed at the platform end of the hall, connected with the main corridor of the school buildings by a cloister, which runs along the east side of the hall. Access can thus be obtained to the platform without passing through the hall.

The classrooms, which adjoin the northern end of the hall, were damaged

A general view from the south. The stone panel on the extreme right of the photograph records the destruction of the old hall and its rebuilding, while below the panel the old foundation stone has been refixed. The panic door shown leads to the hall.

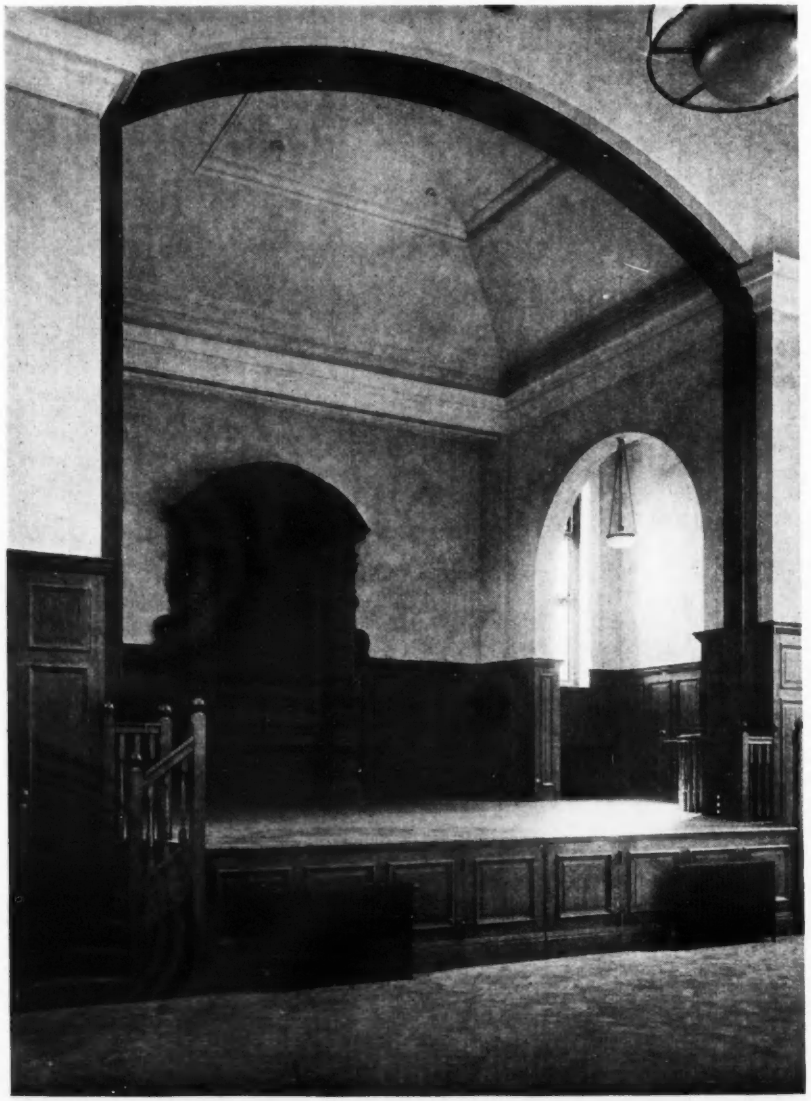


The architects' longitudinal section. The classrooms on the left, adjoining the hall, were damaged by fire, but were reconditioned without rebuilding, so that it was necessary to connect them in much the same manner as the previous building.



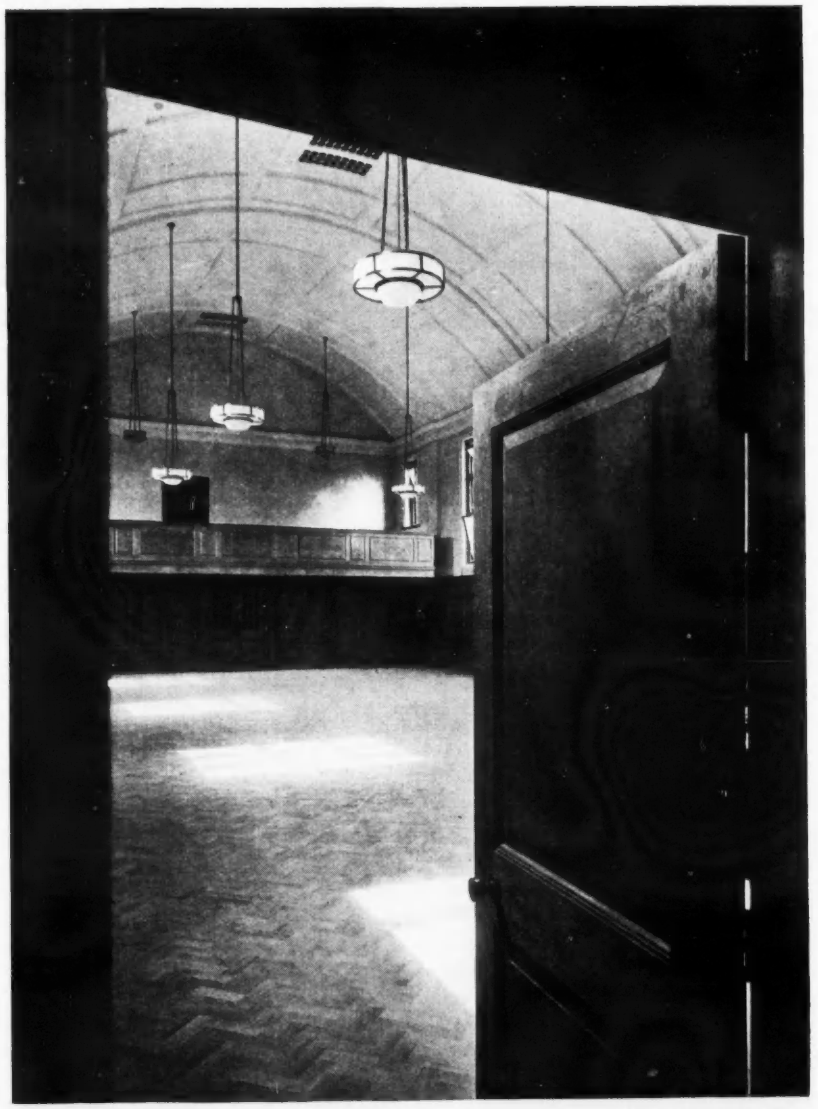
Felsted School: The New Grignon Hall.] [*By Chetwood and Grant.*

The hall is approximately 74 ft. long by 40 ft. wide, but can be further enlarged in order to provide additional accommodation, by removing the whole of the screen and access doors at its northern end, thus adding, approximately, 10 feet to its length.



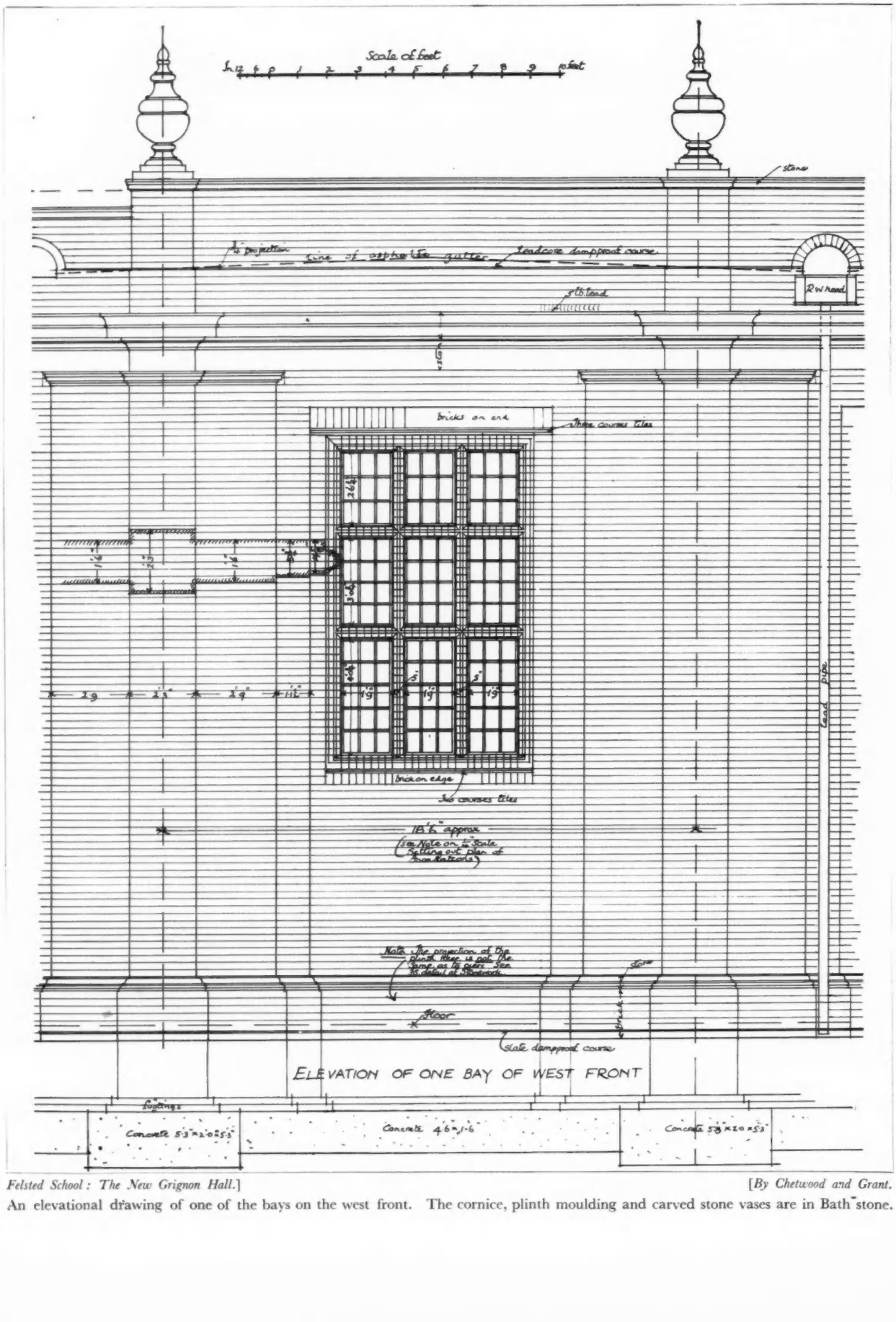
Felsted School: The New Grignon Hall.]

The platform in the hall has special lighting equipment, embodying ranges of footlights which can be brought into action by raising hinged boards in the flooring.



[*By Chetwood and Grant.*

Looking along the hall towards the entrance doors and gallery. The walls are panelled to a height of 8 ft. and are plastered and finished above with a wood float, and coloured cream.



Felsted School: The New Grignon Hall.] [*By Chetwood and Grant.*

An elevational drawing of one of the bays on the west front. The cornice, plinth moulding and carved stone vases are in Bath stone.

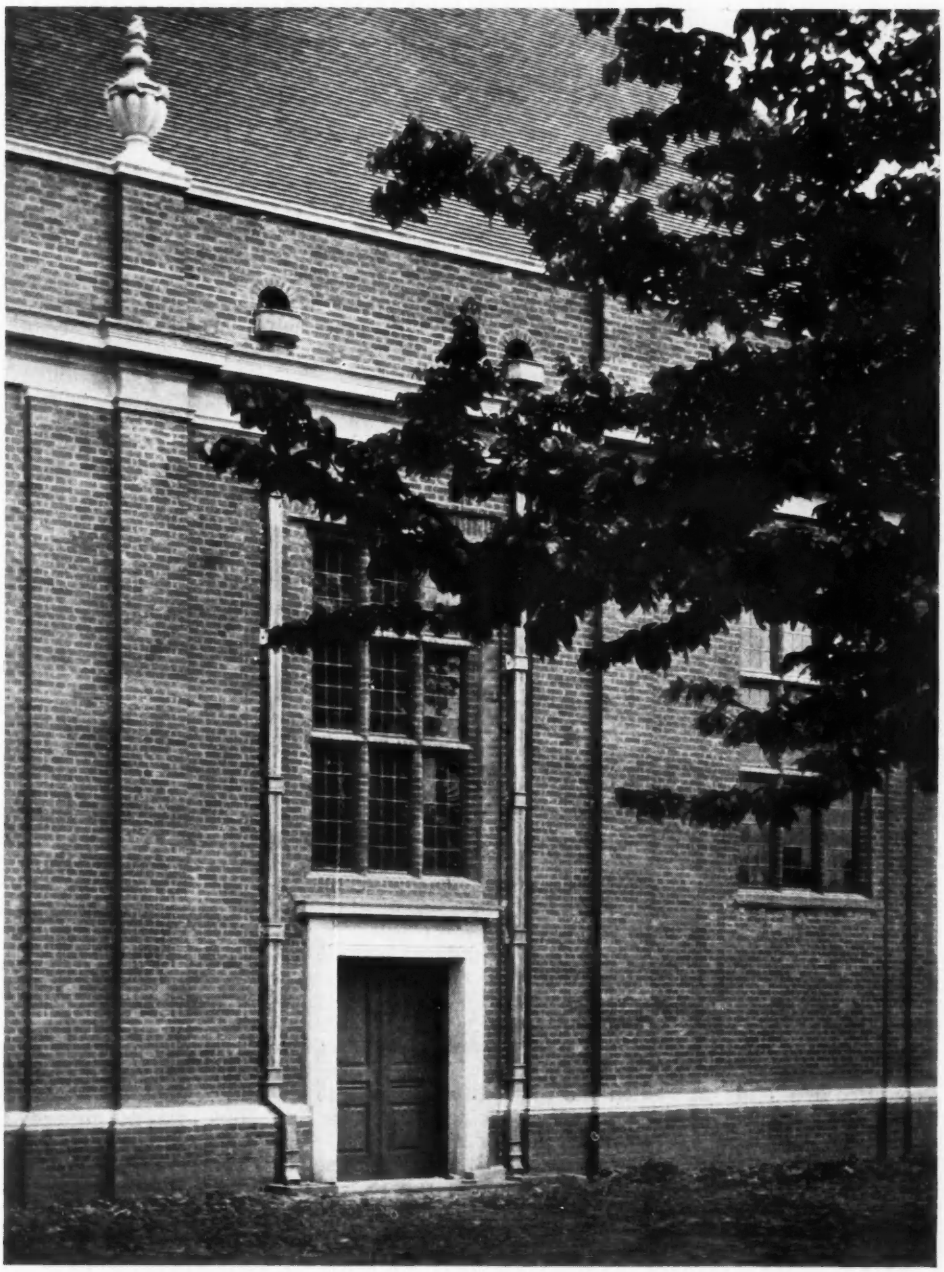
by fire, but were capable of being re-conditioned without rebuilding, so it became necessary to connect the new hall with these classrooms in much the same manner as the previous building. Beneath the gallery at the north end of the hall is an oak screen made in sections and removable, so that for special gatherings the whole of the screen and access doors can be removed and the corridor space at the back thrown into the hall.

The platform is specially designed for the presentation of plays, etc., and has special lighting equipment embodying ranges of footlights which can be brought into action by raising hinged boards of the platform. Winches and gearing for raising the proscenium curtains, etc., and electric lighting battens are provided; and there is large storage space under the platform for scenery, etc.

The seating accommodation of the hall is between 600 and 650, according to the arrangement of the seating.

The stone panel at the south end of the building bears an inscription in V-cut lettering recording the destruction of the old hall and the rebuilding, while below the panel the old foundation stone has been refixed.

The bronze lighting fittings in the hall were specially designed and can be raised or lowered by winches controlled from the roof space.



Felsted School: The New Grignon Hall.] [*By Chetwood and Grant.*

Central bay, west front. The door gives direct access to the hall and has been provided in case of panic.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xvi

A FAILURE AND A SUCCESS

BY KARSHISH

(H. B. CRESWELL)

THE mistake in the New Machine Shop Extension, which, for some time, made it appear that the whole would have to be gutted and rebuilt, was due to an error in the contractor's setting out; but as the extreme permissible deviation from truth was only *three-eighths of an inch*, it will be realized that "error in setting out" has here a meaning that few architects ever have occasion to give to it. The *degree* of error is indicated when I say that silk threads, stretched taut from end to end of the 280-ft. ranges of stanchions, revealed an extreme deviation of two and seven-sixteenth inches; but the *magnitude* of the catastrophe, and the predicament in which it placed us, will not be understood unless certain facts are explained.

The work of building the Machine Shop Extension consisted in joining up the existing shop with detached blocks on either side of it; and in carrying the whole back to a total length of 280 ft. by extending the eleven existing rows of stanchions by 160 ft.

The stanchions were built up of three 10 ins. by 4 ins. "I" beams distanced with plates riveted to their flanges, and with riveted angle-and-plate bases anchored with holding-down bolts to massive concrete foundations.

The central "I" beam members were carried up 30 ft. as bearings for lattice roof girders running *across* the shop to receive the feet of "weaver roof" principals: the two outer members were finished at 25 ft. from the ground with riveted angle-and-plate caps to receive the traveller girders running *down* the shop to which were riveted the rails on which the traveller cranes, straddling the bay, ran. These traveller cranes consisted of a frame on four wheels carrying a winch that ran upon it across the bay, so that a weight could be lifted from any point in the bay and deposited at any other.

It will be clear from this, that the rails on opposite sides of each bay had to be *exactly parallel*, or else the traveller would override them and fall to the ground; but it was necessary, also, that the *alignment* of the rails should be exact, or the same thing might happen; for the travellers were made on a principle which disallowed their running, in any degree, on a curve.

We now come to the crucial point. It is obvious that the traveller's ends had to extend over its wheels in order to get a proper bearing on them. This extension—or wheel-box—stood over the rail towards the roof stanchion; and as the position of the rail was fixed by the bearing of the girder carrying it on the stanchion, it will be seen that the stanchions and travellers had to be made to fit. That "fit" allowed a clearance of half an inch between the outer face of the wheel-box and the near edge of the roof stanchion: the dimension from centre of rail to face of wheel-box being 8½ ins., and to roof stanchion, 9 ins. Three-eighths of an inch was, however, the utmost encroachment on this half-inch clearance that would secure that the wheel-box should not foul the roof stanchion; for there might be vibration, and slight movements due to other causes.

The predicament in which I found myself will be realized if the site of the shop is imagined to be an open floor with eleven pairs of parallel straight chalk lines at 22-in. centres (allowing 4 ins. for width of roof stanchion), each pair parallel with other pairs 30 ft. on each side of it; and these chalk lines are then regarded as the centres of the traveller rails. In order for the stanchions to be placed so that the wheel-boxes would clear the central roof-supporting member, they had to be spaced out centrally between each pair of lines with a maximum deviation of any stanchion of three-eighths of an inch to right or left of the centre. What the contractors, the Wagworm brothers, did for me, was to put the stanchions out of parallel as well as out of alignment with themselves; and make the maximum deviation two and seven-sixteenth inches to right or left of the centre. They then fixed, glazed and slated the roof. My gratitude to the Wagworms for doing this for me was beyond all powers of expression.

What was to be done? The distance across the bays from rail to rail was fixed by the travellers which allowed of only a very small adjustment; the position of the traveller girders was fixed to within one inch, for the stanchions had not been designed for an eccentric load; the over-hang of the wheel-boxes could not be reduced and the travellers had, in fact, already been made. Hart and Beverley Kent agreed with me in seeing no means of getting things right except by pulling down and rebuilding.

I have always been grateful to Hart for his treatment of me when I carried him diagrams showing certain tentative proposals for restorations arrived at after days and nights of brain-wearying toil. The entanglement was so intricate that I could not do more than point out possibilities—I had not myself, in fact, entirely mastered the problem.

"Well," said Hart, "you've got us into this mess, and we shall look to you to get us out of it."

I felt then, and still think, that in saying this he showed deep sympathy and a kind heart. I was not—as I have to explain—responsible for the mess, except that I shouldered an architect's responsibility for the mistakes of those under my direction; but considering all the circumstances it would not have been unnatural for Hart to have turned his back upon me and looked for more experienced guidance. I was greatly consoled by his confidence in me; but the act which I have already spoken of—with great complacency—as entitling me to more gratitude for pulling the Company out of pickle than blame for pushing them in, no doubt operated with him.

By a most lucky chance—as it proved—the inaccuracies which were discovered when Beverley Kent began finally testing the alignment of the traveller girders, were only gradually revealed. The first irregularity reported to me affected only some corbelled brick brackets designed to carry pad-stones on existing walls, and did not in any way involve the main extensions. When I spoke to Beverley Kent on this matter he told me privately that he had discovered deviations from true alignment in certain stanchions, and suspected the irregularities were widespread. We were by this time good friends, for his opinion of all architects had been considerably raised by the ability of one of them to flatter him. I asked him to prevent the trouble from being known, and to this he agreed. Mr. Stevenson was on holiday, and Hart was also away that day; but on the next I saw him. He was greatly annoyed and upset, although the extent of the catastrophe was, at that time, not guessed.

"Well," he said, "they will earn no bonus, that's clear; and they must be made to put things right at once, and told that the Company will claim full penalties for delay as well as any other damages they can enforce for interference with the work of the shops; and understand that they cannot look for consideration or help of any kind whatever."

"No, sir. I mustn't do that."

"Why not? That's the position, and they'd better know it at once!"

"Because if they get to know the full extent of the errors they will disclaim responsibility."

"But they *can't* disclaim responsibility!"

"They will, sir: I know the men. They will invent excuses; raise quibbles; say that I approved and accepted the setting out——"

"You didn't, did you?"

"Certainly not; but they will say I did—they will say anything. They will also put the blame on the sub-contractor who is erecting the steel work, and, when he refuses to make good, claim time-allowance under the strike clause. The work will come to a stop and we shall be forced into litigation."

"What, then, do you propose?"

"Make them admit liability."

"But how are you going to do it?"

"Well, sir, they don't know anything is wrong yet;—except perhaps, through their foreman, that the corbelling in the old fettling bay is not parallel. I will call upon them to put that right—it is a very small matter; and when they have accepted the order I will tell them to adjust the traveller girders in bay 27. There is not much amiss there, and they will probably obey as a matter of course; but once they have accepted responsibility for true alignment, they cannot contend they are not responsible."

It will be observed that I had profited by experience, and that two years' acquaintance with commercial enterprise and of conflict with the shrewd business man, had taught me also to be shrewd. Although I think that my slyness was entirely justified by the circumstances as well as by its complete success, the occasion stands alone in my mind as the only time I have employed slyness; for I have all my life, since, had to do with accredited builders; and as I should be sly only as a last recourse in dealing with rogues, I have never had any reason even to contemplate being so.

In what degree I was responsible for the Machine Shop misfits may be judged when I say that the drawings were completely dimensioned after careful survey of the existing buildings, and a divergence from parallel in adjoining blocks—amounting to five and three-sixteenth inches in 160 feet—was exactly compensated and accurately figured in them; and that the contract laid down that the contractor was to be "solely and entirely responsible" for accurate setting out of the building and erection of the steelwork.

When I went away for my holiday I left the works in charge of a senior assistant who had been employed on the drawings, and gave him particular instructions to check the contractors' setting out in every part and to require them to set out anew if he was not satisfied with any setting out. Further, in order to compel the contractors to act independently, he was not to give any reason for being dissatisfied; he was on no account to express approval of, or accept, any setting out, but was to understand that his checks were for my satisfaction, only. In addition, I wrote to the contractors and told them that the fact that no objection was raised to any setting out did not imply that it was approved or accepted.

On my return, this assistant of mine answered my questions with adequate assurances. He was the first man I ever sacked—not, as I explained to him, in retribution; but because his position was one of trust, and I could no longer trust him. He was a well-spoken fellow, of fair general education and some social pretensions, who was a first-class draughtsman and well equipped technically for his standing of twenty-seven years; yet when I met him by chance in Holborn, a quarter of a century later, he was still an architect's assistant, and did not seem to occupy a much better position in life than when I said good-bye to him at Albion works. Such is life!

The Wagworm twins, finding themselves involved up to the knees before they knew it, accepted the inevitable—I will not say "like lambs," but like two bears with two sore heads. I had no sympathy with them, for they had embarked on the work with no other idea than of scrambling through it and getting away with bonus and profit. The restoration was achieved partly by reducing the straddle of those travellers that were still in the hands of the makers; partly by corbelling out from walls and bracketing out and stiffening stanchions; and partly by cutting through anchor bolts, and drilling for and running new ones, after remaking the bearing-connection with roof-girders at the heads of stanchions—a most tedious and difficult business. The actual delay of the company's business was not so great as was expected; for the machine tools could only be installed by degrees, and the various bays were accordingly completed in the same order as they were to be brought into use. The cost to the contractors, in addition to loss of bonus, was over one thousand pounds—as I was told by the foreman of the sub-contractors for steel-work erection.

It was the capacity and loyal co-operation of this foreman erector that achieved this success. He was, without exception, for his station in life, the most uncompromisingly dirty man I ever saw. If he carried away a smudge on the forehead with him on Monday, he brought back memories of it on Tuesday, and it was difficult to suppose he ever took off his clothes, or even his boots: they seemed to be grimed on to him. He had difficulty, with his thick fingers, in handling the silk threads that engaged so much of his time.

"I can't hardly feel 'em, even," he said.

"Why don't you wash your hands, then?" I suggested.

Although he did not act on this advice, he was clearly greatly struck by the freshness of the idea.

The cheerfulness and obliging activity of this little man was one bright spot among many clouded weeks; and he seemed well aware of this for, when all was finished, he came to me wriggling with solicitude like a spaniel and, after puzzling me with confidential allusions to our cordial relations, delivered himself frankly of what was on his mind.

He wanted a tip.

I was most grateful to him for so energetically helping the business through; I knew that Beverley Kent shared my feelings and that the Directors were appreciative; but the idea of rewarding the man for taking care of the Company's interests rather than his master's, stuck in my throat. However, Mr. Stevenson authorized me to make the proposal to his firm; the necessary permission was forthcoming; and I had the pleasure of presenting my grimy friend—for instant thumb-marking—with two new five-pound notes, which amounted to the sum he had very frankly told me would meet his ideas of what was "fair." The money represented about twenty pounds at present values, and the recipient was recompensed and grateful.

It may seem that since the disasters which overtook each of my first contracts were not due either to any one serious act, or to successive trivial acts of negligence, on my part, that I, therefore, learned no useful lesson from those unlucky experiences; but, in point of fact, I learned a most valuable lesson which was: that in the absence of the bona-fide good intention of an honourable and capable builder, no building will, by any coercion of Law, ever be successfully completed; and all architecture becomes impossible. The mistake I made—or which, rather, was made for me—was the employment of contractors whose standards of fair dealing and of accomplishment fell far short of what was due from them. As a consequence, the first contract which called for speed, produced delay; and the second which demanded exactness, ended in confusion; for in both, the contractors had no other care for the work than the money to be gained from it. If I had handed the same drawings and specifications to reputable firms of established builders, they would each have made the accomplishment of speed and exactness a point of pride and honour, and I should have been able to chronicle two complete successes instead of two complete failures.

I got this lesson, as has been seen, by negative proof which, though an unpleasant method of gathering knowledge, is certainly an impressive one; I was now to confirm it, more agreeably, by proof positive.

While the Wagworn twins were eating their insides out, I had been completing designs for new shops on land acquired by the Company adjoining the western boundary of the Albion Works. It is only necessary for me to say that these shops were between three and four acres in extent; that they were intended for light work; that they formed a separate group of buildings; and that the front elevation —still to be admired from the railway, by passengers of taste—was my first architectural design.

When my contract drawings, specification and bills came before the Board for final sanction, and the question of inviting tenders was under discussion, Mr. Stevenson broke out :

"Er—ahem—— Why not—it occurs to me—ask Farrar and Oldport for a tender ?"

"They always have tendered."

"Pardon me, Mr. Whistlow, I am addressing the Board. Ahem—er—I propose that we do not invite competitive tenders, but ask Farrar and Oldport for one. We need not accept it if we do not like it—are you listening Hart ? After our experiences, it would be a good bargain if we could get Farrar and Oldport for ten, or even fifteen per cent. above rock-bottom prices."

"They always have been far above the lowest," I said.

"As we are aware, Mr. Whistlow. Hart, what do you think ?"

It was soon settled that I should ask this firm for a tender, and explain that there was no proposal to invite other tenders if theirs was acceptable; and that I should direct them to attach their priced bills to their tender, so that I might examine them and make my recommendation.

Farrar and Oldport were a well-known firm of builders whose joiners' shops and head offices were in Nollingborough. They built churches, mansions and public buildings all over the country for leading architects, but had been unsuccessful in all their tenders to me, except for a club-room addition to the works mess room.

To cut the story short, I got from them a tender for £57,000 odd, which I made out to be 6½ per cent. more than Wagworm's rates would have given; but at the bottom of the summary at the end of the bills a deduction of "5 per cent. for full quantities" had been made. I told their manager the quantities were not "full," but he said that Mr. Farrar had himself made the allowance; as he thought the character of the work justified the deduction—in fact, I have no doubt whatever that, from a wish to respond to the confidence shown them, and in confidence that they would meet with fair treatment, the firm put in a lower tender than they would have risked in competition.

I now for the first time knew what it was to have a good builder to work with, instead of men who were not so much bad builders as no sorts of builders at all. Scales fell from my eyes. Things were all right then ! There was work in the world worth doing, and men who found it worth doing well ! Finnian, the firm's manager, was a sleek, fair, cheerful little fly-weight of a man who regarded me as an accredited architect —which no one before had done; and there was never a shadow of distrust between us. I was made aware, before work was done, that my wishes were being observed, instead of having to keep track of things like a bloodhound to discover, after work was finished, that my instructions had been eluded—if I could; I was freed from the anxieties of supervision—in fact, I was allowed to feel that the work would have been completed just as speedily and efficiently if I had been a hundred miles away, as it had been under my eye. When any point involving diverse interests had to be agreed, Finnian and I did not wrangle over it, but put our heads together to arrive at a just compromise; and, if I had to bear a little hardly on him Finnian might perhaps give a funny little grunt of concern—as though someone had tapped him in the wind—but he cheerfully accepted the rebuff, knowing that I would help him when I could.

The shops were beautifully built and up to time—after certain contract allowances had been made; and Finnian came to me with the final Statement of Account in draft, to get my approval of two extras for which he had omitted to get written authority, and one which he had forgotten to mention; because, as he said—"We do not want any questions raised after our account has been rendered."

Farrar and Oldport did much work for me in future years, and always punctually and well, whatever their profit—or possible loss—might be; and if, afterwards, I learned to prefer smaller firms whose principals came on to the works themselves, that is no disparagement of Farrar and Oldport, who were organized for big contracts as well as small ones.

By the time these large buildings were completed I had been employed by the Eureka Plough Company for almost three years; the time had come—as Mr. Stevenson put it—"for a slackening of the ties"; and by a most happy chance—if anything in life is "chance" — the stick I had thrown into the walnut tree so devotedly years before, brought me an unexpected reward of nuts.

NEXT WEEK—XVII : PRIVATE PRACTICE AT LAST !

The previous instalments appeared as follows :

May 27. i : I am Articled.
June 3. ii : Episodes of Pupilage.
June 10. iii : Episodes of Growth.
June 17. iv : My First Job : The Sewer.
June 24. v : My First Job: The "Pipes."
July 1. vi : I Turn Clerk of Works.
July 8. vii : Bradshaw & Son: Builders.
July 15. viii : Joe Richards : Foreman.
July 22. ix : Trials of a Clerk of Works.
July 29. x : A New Venture.
Aug. 5. xi : The Resident Architect.
Aug. 12. xii: An Architect's Early Gruel.
Aug. 19. xiii: An Uphill Fight.
Aug. 26. xiv: A Disaster.
Sept. 2. xv : The Law's Majesty.

The Reconstruction of Alexandra Palace

The intentions of the National Government in regard to the scheme for the reconstruction of Alexandra Palace, North London, are stated, says *The Times*, to be uncertain. The chairman of the trustees, Mr. E. A. Cawdron, announced on Saturday last, however, that preparatory work will be continued. Accordingly, arrangements will proceed for the demolition ceremony and the opening of the North London Exhibition by the Lord Mayor and Mr. George Lansbury, M.P., on October 14.

Mr. Cawdron said the trustees could not admit the right of the Government to turn down the scheme at this stage, and they assumed that a letter they had recently received from the Home Development Committee at the Treasury was merely a temporary hold-up until all the schemes before the Government had been gone into thoroughly and passed on their merits. A letter from the London County Council was merely the result of the Treasury decision. The letter from the Treasury stated that, "having regard to all the factors which the committee has to take into account when considering claims for grants, they have reached the decision that they cannot regard the work proposed as suitable for State assistance under Section 4 of the Development (Loans and Grants) Act, 1929. They are accordingly unable to recommend the grant desired by the trustees."

If the decision were final, Mr. Cawdron argued, then the term "scrap of paper" could be applied to the obligations of the Government. The trustees were urged by the late Government to raise the money to proceed with the scheme.

KING GEORGE HOSPITAL, ILFORD, ESSEX

C. J. DAWSON, SON AND ALLARDYCE, ARCHITECTS; T. A. POLE, CONSULTING ARCHITECT

The main front, housing the administration and out-patients' department, as seen from Eastern Avenue. The walls are faced with Brentwood red bricks, with artificial stone copings, cills and strings; and the roof is covered with hand-made, sand-faced tiles.

THE King George Hospital is built on the site of the Ilford Emergency Hospital, which was erected in 1909. The various buildings, together with the Children's War Memorial Hospital Wards, are incorporated in, and form part of, the new hospital. The area of the site was originally 4½ acres, but by the recent acquisition of adjoining land this has been increased to about 6 acres. Further permanent open space is provided by the adjoining war memorial garden, the grounds of the Borough Maternity Hospital, and the Horns School playing fields.

At the time the emergency hospital was built, the site was comparatively in the country, and the most direct and convenient access to it was from newly-formed and made-up roads on the northern boundary, the southern being a narrow country lane. A few years ago, however, this lane was widened and made up, and became a portion of the new main arterial road from London to Southend. It now forms the most direct road for access to the hospital.

As will be seen from the plans reproduced on page 340, and on one of the supplements accompanying this issue, the administration and out-patients' block has been erected with its principal front and main entrance facing this arterial road. To shorten the distance between the administration block and the wards, and also to provide additional sun-balcony space, a colonnade has been provided between the ward blocks in line with the sun balconies at the southern end of the wards.

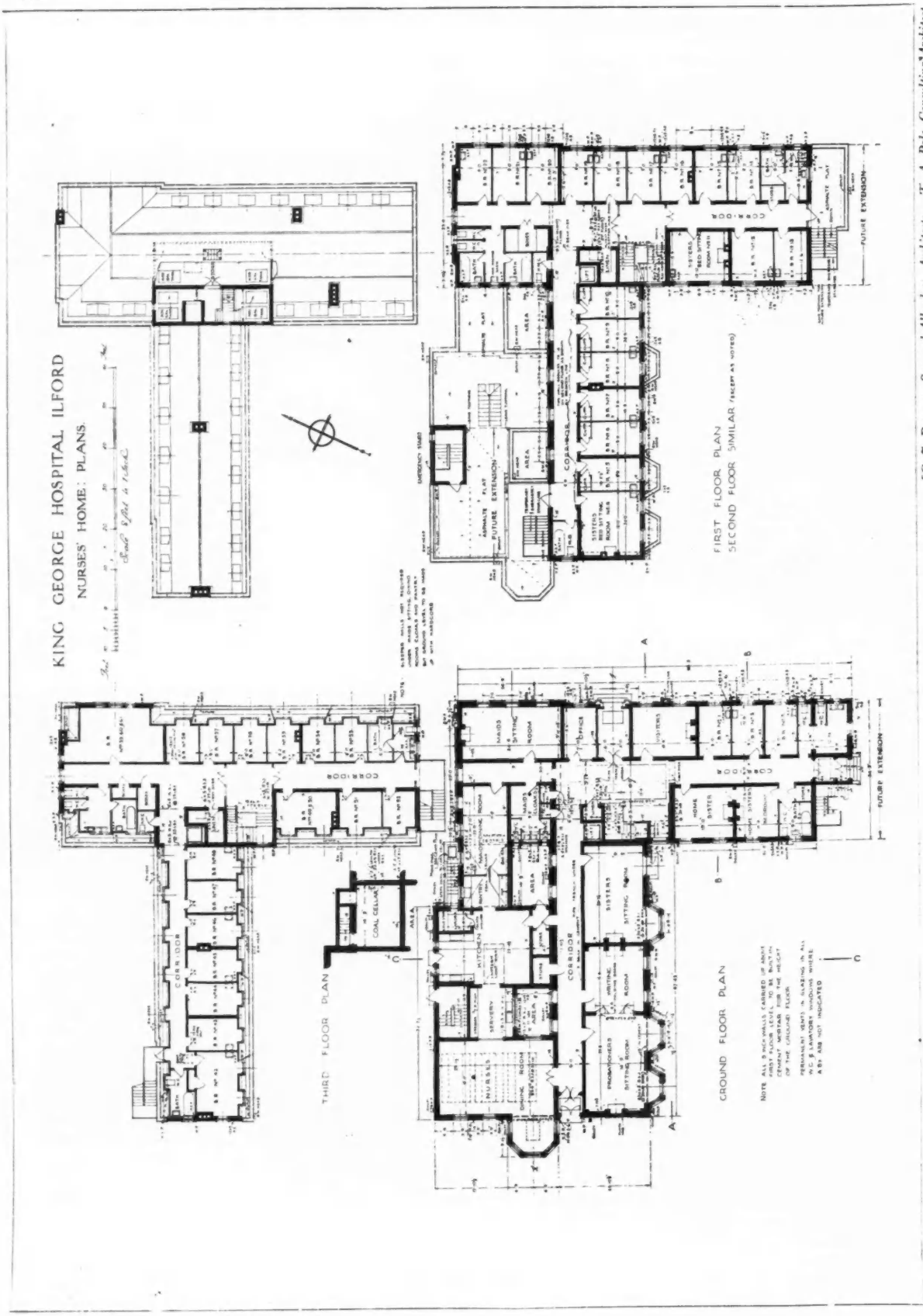
The main entrance surround is carried out in Portland stone. On the right can be seen the foundation stone, laid by Brigadier-General R. B. Colvin, in July, 1930.

From the central entrance hall of the outpatients' and administration block, a new connecting corridor runs north to the original main corridor, which runs east and west on the northern portion of this site.

On the south side of this main corridor are the five ward blocks, so placed that each ward gets the maximum of sunshine and is protected from the northerly winds. On the north side are the kitchen and stores blocks, dispensary, operating and massage blocks and the casualty block, so that practically the whole of the various units of the hospital are directly accessible from this corridor.

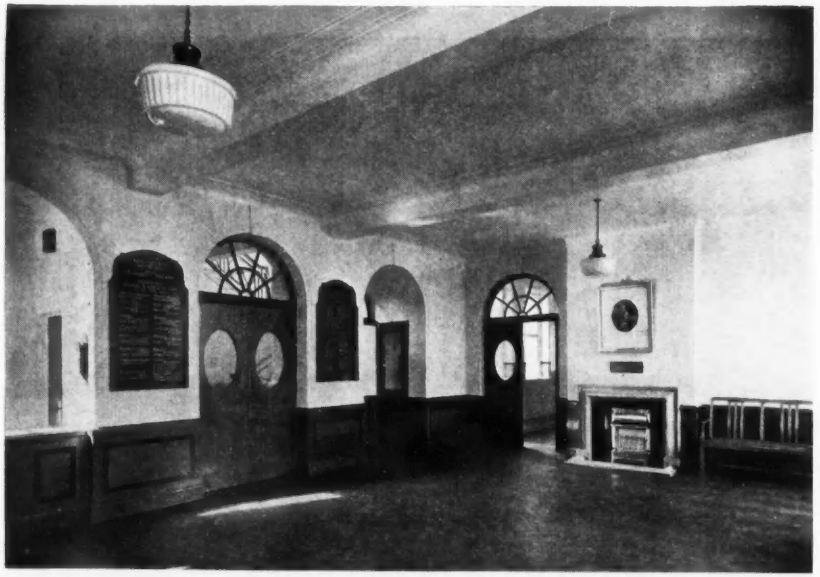
At the north-east corner of the site are the boiler house, mortuary and pathological laboratory, and at the north-west corner are the nurses' home and garden, between which space is reserved for future extension.

The Ilford War Memorial children's wing and hall was erected and opened in 1927.



King George Hospital, Ilford. [*C. J. Dawson, Son and Allardyce, Architects. T. A. Pole, Consulting Architect.*

Ground, first, second and third floor plans of the nurses' home. For plans of the out-patients' and administration building, etc., see supplement accompanying this issue.



The main entrance hall of the hospital, in the centre of the administration block. The doors lead to the porter's room, staircase, and the corridor to the out-patients' department.

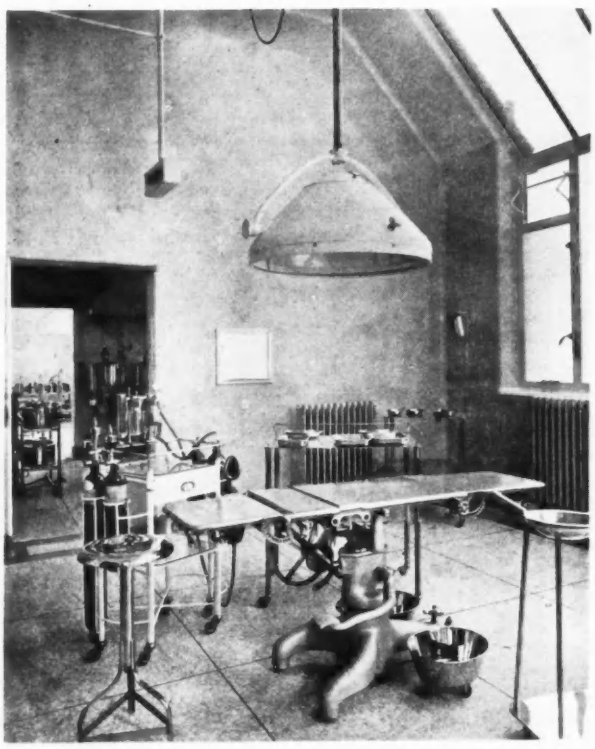
The boardroom is on the west side of the entrance hall to the out-patients' and administration block. The doors on the right give on to the corridor and secretary's room, respectively.

King George Hospital, Ilford.]

In this men's ward accommodation is provided for twenty-three beds. At the end are the doors leading to the sun balcony.

[*C. J. Dawson, Son and Allardyce, Architects. T. A. Pole, Consulting Architect.*

The kitchen. The first door on the right gives on to the vegetable scullery and the second to the corridor leading to the goods hall. That on the left leads to the kitchen, etc.



On the first floor: an operating theatre, looking through the sterilizing room towards another operating theatre.

This corridor connects the main entrance hall with practically the whole of the various units of the hospital.

King George Hospital, Ilford.] [*C. J. Dawson, Son and Allardyce, Architects. T. A. Pole, Consulting Architect.*

The main entrance to, and the hall of, the Ilford War Memorial Children's wing. The walls of the hall are lined with Roman marble and inscribed with the names of over 700 Ilford men who fell in the Great War.

LETTERS FROM READERS

Art and Industry

SIR,—My first thought on reading the announcement of the formation of yet another Board of Trade Committee to foster good industrial design was: Surely there already is the British Institute of Industrial Art, for that very purpose, with its permanent but ever-changing exhibition in a small dark corner of the Victoria and Albert Museum.

It is difficult to keep pace with the multiplicity of committees, commissions and societies which are so fashionable nowadays, and which so frequently cover the same ground.

What, for instance, is the precise difference between the D.I.A. and the B.I.I.A.? And has not the Royal Society of Arts' Annual Exhibition of competitive industrial designs (held this month at the Imperial Institute) been overlooked? I have visited this exhibition and was amazed at the general high standard of technique, if not of design, and it definitely *is* the means of bringing manufacturers and young designers together.

When I saw the well-organized Swedish Exhibition of Industrial Art, in Lower Regent Street this year, it occurred to me that it should be followed by an all-British Exhibition, on similar lines, to be held in the same building, and equally well advertised. We could have put up quite a good show, as was indicated by the small exhibition of table-glass in Grafton Street which followed soon after.

As an architect I know it is often difficult to obtain simple, well-designed fittings, free from the kind of eccentricity that so frequently masquerades as art, and I agree with Mr. Noel Carrington that simplicity often costs more, but I do not agree with him in thinking that the organization of an exhibition—or even periodical exhibitions—should be so formidable as he supposes.

The Arts and Crafts Exhibition Society, with only slender financial resources, but with much enthusiasm, holds triennial exhibitions and is, by the way, to hold one at the Royal Academy during the last three months of this year.

It is true, of course, that mass-produced goods do not make the same appeal as handicrafts, but the choice, at least, is less limited with good machine-made objects.

I suggest, as a start, wider publicity for the existing permanent B.I.I.A. Exhibition, enlargement of its scope and removal from its present obscurity at South Kensington to a more central position, as convenient as the lately opened Empire Marketing Board's shop in Burlington Gardens, but that requires money, and where is it to come from, at the present time, except from a limited number of impoverished manufacturers with artistic ideas? BASIL OLIVER

SIR,—Mr. Carrington in his letter rightly points out the important position occupied by the architectural profession in relation to the big subject of industrial design.

The thing that is most needed today is concerted effort along a clearly defined course. What is required is not so much an agreement as to the style on which the new designs should be based, but a firm determination on the part of all designers to keep fitness for purpose always before them as the common basis, and to insist on the severe elimination of the non-essentials.

The acceptance of this as the foundation of design would go a great way towards harmonizing the work of the designers for industry.

CHARLES HOLDEN

SIR,—Mr. Noel Carrington, in his very interesting letter to your JOURNAL, has in view an exhibition of an international character which will endeavour to show the functions of design in civilization.

This project is surely deserving of the most sincere consideration by all the authorities concerned, and although such a subject is necessarily too wide for general contemplation, yet experience has proved that "the house" and all it stands for is, as he suggests, the real background or "central unit" for all practical purposes.

The preparation of such an exhibition would undoubtedly take some considerable time, but perhaps an optimistic view of three years might still allow time for the findings of the Board of Trade Inquiry to be incorporated in the exhibits (or some of them); in fact, any such findings will hardly be intelligible to the public unless they are demonstrated in some equally practical way.

It is fortunate that two such able architects have been included among the Commission which is formed to discover a method of bridging the differences which are supposed to exist between art and industry; they cannot, however, be expected to achieve all the desirable solutions without the assistance of other members of the profession.

That talent exists for this purpose is proved by the fact that the schemes and articles which finally become "la mode" are invariably produced by the architect in the course of his practice; his ability to harmonize the necessary functions with his problem is only excelled by his powers to produce individual objects of design, should the occasion demand it.

There is also in existence a large body of excellent craftsmen, in the majority the product of the various art schools and studios, and these craftsmen-artists are capable of achieving the desired results if they could be organized and directed along the right lines. The competitions of industrial designs, which are organized by the Royal Society of Arts and now on view at the Imperial Institute, show much individual initiative, despite the fact that the large proportion are, as yet, students; the nature of the problem is also limited to the particular requirements of the firms or donors of the prizes. Our manufacturers are not blameless in the matter of the selection of "Design," but I am confident that, were some comprehensive scheme adopted, the work of our national craftsmen—and women—would not be found lacking in artistic merit.

The stimulus of such an exhibition as the one suggested by your correspondent would be immensely beneficial to our many artistic industries and, of course, the D.I.A. and kindred bodies have urged the opportunity for many years, and would be able to offer valuable experience with the manufacturer. The large art schools and institutions usually keep in touch with their ex-students and other bureaus exist for similar purposes.

If our manufacturers could be persuaded to realize that the promoters of such a scheme were interested in the welfare of English craftsmanship, were competent to assist in the choice of "design" in every production, and were more certain in their judgment of things artistic than is the average "buyer" (who now seems to be chief in control of such important things), then the success of the exhibition and of its objects would be immediate.

WALTER M. KEESEY

SIR,—Mr. Noel Carrington, in his interesting letter printed in your issue for August 26, stresses the important part which architects will have to play in relation to the forthcoming committee to be set up by the Board of Trade, to deal with the relationship between Art and Industry.

Any architect who has seen the inside of his building wrecked by ugly furniture and decoration, the outside ridiculed by its veneer of advertisements and other evidence of modern commerce, cannot fail to realize that the interests of the community, even his own reputation—a matter of small importance to anyone but himself, and therefore not, perhaps, to be considered—are really bound up with this committee. It is the chance of a lifetime to put

forward in a compelling manner views which, in the ordinary course of events, an architect might consider untimely through a misunderstood sense of "boosting his own wares."

Apart, however, from the views of the architectural profession, such bodies as the D.I.A., the Society of Arts and Crafts, etc., have such a large number of architects in their ranks that there should be no risk of lack of representation, so long as they recognize that their aims are similar and therefore present a united body of opinion.

Mr. Carrington suggests an international exhibition in three to five years' time. This would be time enough in which to prepare and organize such an exhibition, but not, perhaps, in which to organize and prepare industry. For a bad exhibition, or even an exhibition in which bad things occur, would do more harm than good, and might merely show that things could be done better abroad.

The holding of smaller permanent or temporary exhibitions is of paramount importance, and much will depend on the controlling organization. This should be strong enough to act as a real selection committee, above the influence of trade interests, and see to it that anything ill designed or unfit for its purpose is rigorously excluded. But these are presumably questions with which the committee will deal. It will take a great combined effort to get the public there, but it might be done by careful propaganda !

In the meanwhile, what is wanted is public criticism, fair criticism, which in this country is often stifled by the risk and cost of fighting an action for libel.

W. RALPH BRINTON

A.A. Materials Bureau

SIR,—It was good to see your reference in the JOURNAL for August 19 to the Architectural Association's Sample Bureau.

Not only is such a bureau invaluable to the architect, but it is also invaluable to the manufacturer, for he knows that when his products are exhibited in the bureau they will get a fair deal, and that there will be no question of the highest bidder getting the best recommendations, but his products will be judged on their merits and suitability for specific jobs.

The Committee of the Architectural Association and their able secretary, Mr. Yerbury, are to be congratulated on their forethought in creating and developing this service and for finding Mr. Winser to run it.

J. C. P.

HOUSE AT SEAL, SEVENOAKS, KENT

DESIGNED BY W. H. ANSELL

The garden front. The walls are in multicoloured stock bricks, and the roof is covered with hand-made tiles. The steps on the left of the photograph lead down to the lawn, which gives on to the rose-garden, the wild garden and the orchard.

"LITTLE PADDOCK" is situated on a delightful site of four acres at Seal, near Sevenoaks, Kent. The land slopes to the south and west. On the north side is the Maidstone road, but a belt of high trees, and the bank formed when the road was widened a hundred years ago, effectively shield the site from north winds and the noise of traffic.

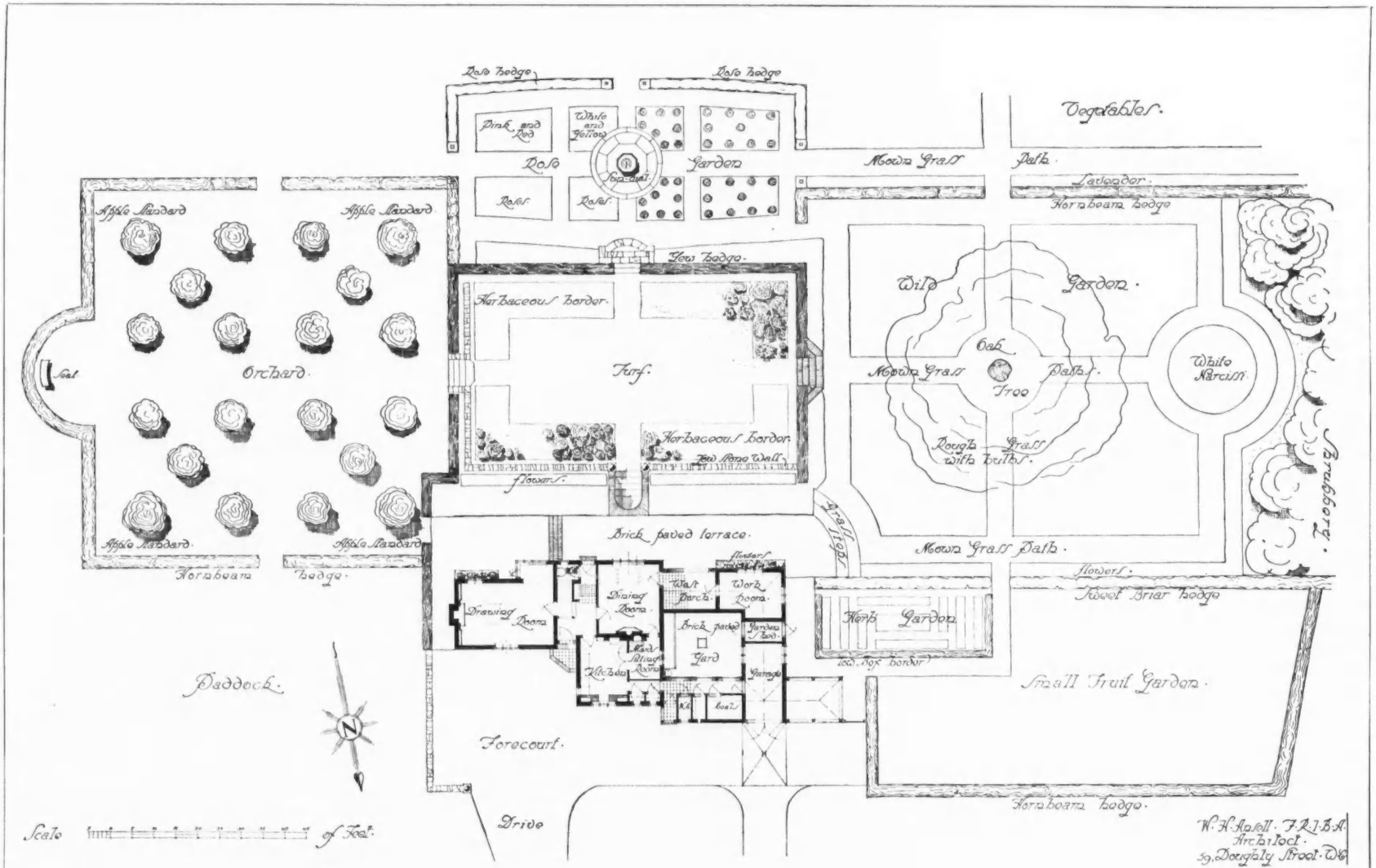
The wood curves round to the east, giving protection on that side also, but the south view is open, and extends for about a mile over the Wildernesse golf course. Chance Wood, a fine beech wood, bounds the view on the left.

Another view of the garden front, taken from the south-west. The one-story projection on the left houses the west porch and a workroom; and the door on the extreme left gives access to the garden shed.

The fall of the ground being considerable, the placing of the house on the site and its approaches was a matter for a good deal of consideration. A magnificent tree standing clear in the paddock was an obvious focal point in the garden design, and was made the centre of the wild garden. Hornbeam was used for the hedges to the orchard and wild garden; yew for the central lawn, and rose hedges for the rose garden.

As will be seen from the plan reproduced on the facing page, the kitchen and dining-room are on one level, but the large drawing-room is approached from a landing a short way up the main stairs.

A little enclosed brick-paved court provides a private yard to the kitchen quarters, and a covered way leads from the house to the garage.



"Little Paddock," Seal, Sevenoaks, Kent.] [*By W. H. Ansell.*

To obtain a level base for the house, a small lawn, with herbaceous borders all round and a yew hedge enclosure, was formed directly in front of it. This has steps up to the house terrace, and up to the orchard on the east; steps also lead down to the south rose garden, and to the wild garden to the west. The axial line of the whole converges on the oak tree.

THE SKETCH CLUB

THIRTY-SEVENTH SESSION

AUGUST HOLIDAY COMPETITION PRIZE AWARDS

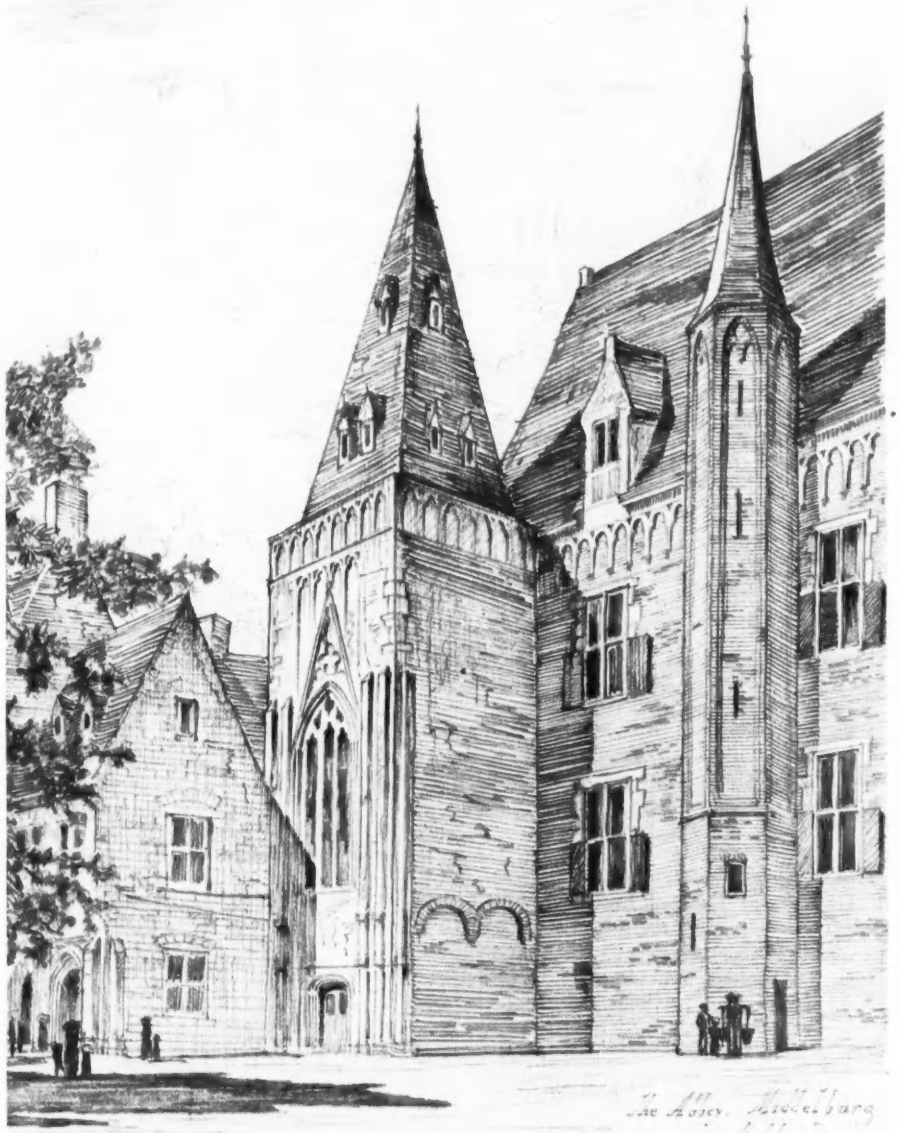
By Peter B. Dunham.] (Pencil 9¾″×13¼″)

Sluis, Holland.

THIS session is devoted to some of the sketches submitted in the second of this year's three Holiday Sketch Competitions. After careful consideration of sixty-six sketches submitted by twenty-two competitors, the assessor awarded first prize to "The Abbey, Middelburg, Holland," submitted by "Sniff." On opening the sealed envelope the sender was revealed as

PETER B. DUNHAM,
Streatley House,
Streatley, Luton, Beds,

who therefore is awarded the prize of ten guineas.



(Pencil (10¼″×12¼″)

FIRST PRIZE: PETER B. DUNHAM.
The Abbey, Middelburg, Holland.

By Peter B. Dunham.] (Pencil 13″×16½″)

Bruges, Belgium.

The second prize of five guineas was won by "The West Front of Bourges Cathedral," submitted by "Fyzabad." He is

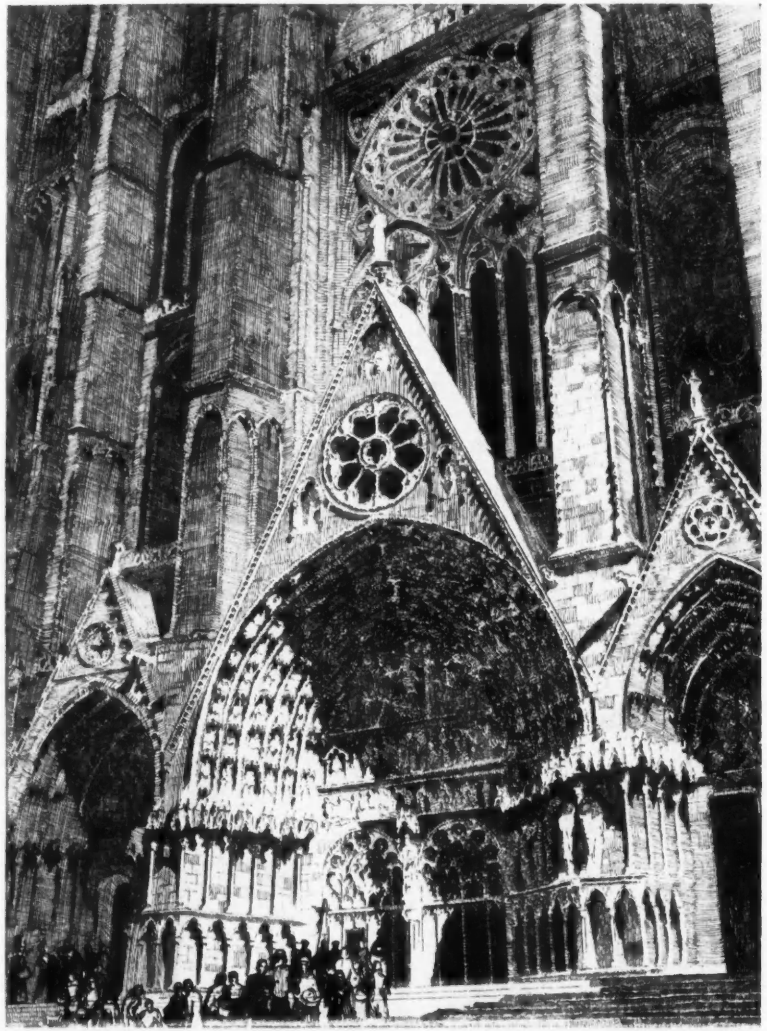
H. F. HOAR, B.A. (ARCH.).,
5 Gunnersbury Drive,
Ealing, W.5.

It is proposed to publish a further selection of the August Competition sketches in forthcoming sessions.

The winning designs in the first of this year's competition were reproduced in our issue for August 12. The closing date for the third and final competition is Tuesday next, September 15.

By W. E. Wilmshurst.] (Pencil 9¼″×13½″)

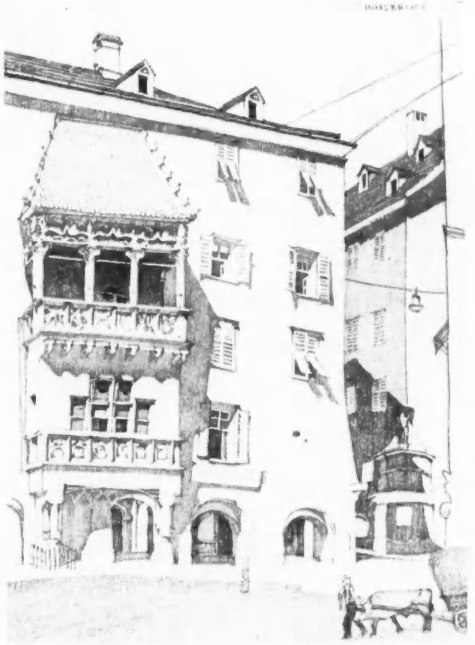
Couch's House, Polperro, Cornwall.



(Pen and Ink) (13″×18″)

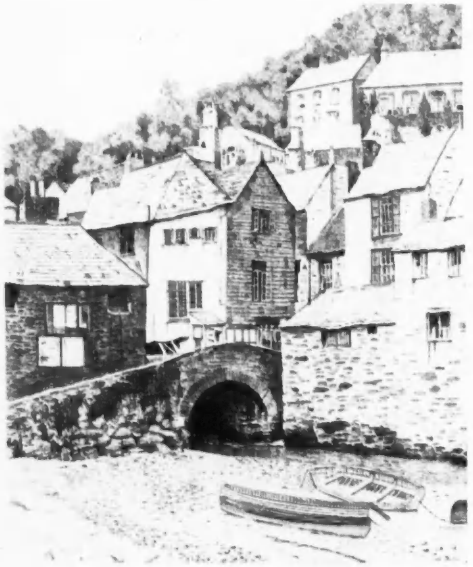
SECOND PRIZE: H. F. HOAR.

West Front: Bourges Cathedral.



By Vincent Warrilow.] (Pencil 8″×11½″)

Innsbruck.



By W. E. Wilmshurst.]
(Pencil 8¼″×10″)

"The House on Props," Polperro, Cornwall.

[*By Vincent Warrilow.*
(Pencil 9″×10½″)

Mittenwald.

THE ILLUMINATION CONGRESS

On this and the following pages are printed extracts from some of the papers read at the Glasgow session of the International Illumination Congress, held on Friday last. The forthcoming sessions and arrangements of the Congress are given in the Architects' Diary on page 351 of this issue.

THE PROVISION OF ADEQUATE DAYLIGHT IN BUILDING REGULATIONS

By P. J. Waldram

IN Great Britain close study of daylight was enforced by the survival of the ancient Roman law of light. This, being a law which gave rights of light to individuals rather than to communities, led to frequent disputes between individual property owners in towns as to whether some new proposed building would or would not leave to its surrounding neighbours a sufficiency of light and air.

For so long as the measurement and predetermination of daylight were virtually nothing better than guess-work and opinion, generally unconsciously biased, and, for so long as definite standards were non-existent, such disputes almost invariably led to bitter litigation.

There was an insistent demand both from architects and the courts for methods of predetermination and measurement which should be at once scientifically accurate and applicable to the most complicated case, and yet sufficiently simple to be applied by draughtsmen. There was a demand no less insistent for standards, which would command respect from both sides of a dispute, of adequate light for ordinary purposes such as offices and dwellings, and for special purposes such as elementary schools.

There was at the same time a demand also for methods of representing adequacy and inadequacy on drawings in some simple, obvious, yet accurate manner to enable the facts as to light to be grasped readily by litigants, potential or actual, and by non-technical lawyers.

All these demands have been met. In Great Britain certain standards of adequacy are well established; and convenient methods of measurements, predetermination and representation have been evolved, and considerable experience has been acquired of their use.

The question naturally arises as to whether such tools ready to our hand are such as the Commission can recommend to those who bear the great responsibility of framing building regulations. The fact that they have been adopted by practical people necessarily interested in the results of disputes is strong *prima facie* evidence of their reliability.

The meteorological data of the crowded industrial and commercial centres of the world and the need both for concentration of buildings and also for the light and air are similarly convincing; for in all these centres the periods of dull weather bulk far too largely to be neglected.

When the architect is designing windows to light the interiors of buildings and the legislator is fixing the permissible limits of external obstruction, neither can consider averages, any more than an engineer can consider average loading when designing a bridge. The engineer must design for the most severe loading reasonably to be expected, even though at other times his bridge may have nothing to carry—the architect and those who frame building restrictions must legislate for those periods of dull and wet weather which can reasonably be expected, even though at other times there may be a surplus of light.

It is possible, of course, to visualize particularly favoured localities where a wet or cloudy day is so rare that the health and eyesight of the inhabitants would not suffer by being forced to use artificial light all day on such infrequent occasions.

Such places might consider that they could afford so to frame their building regulations that sufficient light will penetrate buildings in cloudless weather. But even if they did, the practical difference between building regulations based on the generous amplitude of sunny weather and building regulations based on the requirements of dull weather cannot be large; even in midsummer the lower rooms lit, or alleged to be lit, from the internal light wells of a skyscraper require artificial light all day and every day. In so far as research has yet proceeded, the criterion of inadequacy of daylight appears to be a matter of ratio only and to be largely unaltered by variations in amount.

The British legal standard of adequate light for ordinary purposes is 0·2 per cent. daylight ratio (0.4 per cent. cill ratio). As this means only 10 lux or 1 foot-candle in dull weather, it is scarcely likely to be objected to as excessive; and no country in the Temperate zone, however sunny its summers may be, is at all likely to be content with less over the winter months, which must of necessity be the governing factor.

It is very important to bear in mind that this standard was in no way founded upon any theoretical opinion as to what people *ought* to require, but was founded upon and has been checked by long series of measurements of the daylight ratio at positions fixed by a large consensus of reliable opinion as being the positions where light changed from adequate to inadequate. Also, since it was first ascertained, suggested and published some twenty-three years ago, long before any records of sky brightness were available, it has remained absolutely unaltered in spite of the most searching and hostile criticism, and in spite of the most rigid and comprehensive tests culminating in the long test carried out by Government departments described in the Paper 12 Great Britain 10, circulated last year.

It possesses another advantage of no small practical value. In all cases of external obstructions which present a more or less level sky line, such as houses of a given height on the opposite side of a street, light wells terminating in flat roofs and the like, its position in any interior is for all practical purposes identical with the "no-sky line" or limit of penetration at table height, i.e. the point which is so far distant back from an obstructed window that sky ceases to be visible between the top of the obstruction and the top of the glass—a point which can quickly be ascertained without any calculation of ratios or illumination.

This is the standard of inadequacy adopted in the communication from Germany (12 Germany 1) circulated in 1929.

The limit of visible sky which has been largely used in this country as an alternative in suitable cases to the 0·2 per cent. daylight ratio or legal "grumble point" has the advantage that it can readily be set out by any architectural draughtsman upon alternative designs for new buildings.

It is therefore suggested that the minimum standard of adequate daylight, viz. 0.2 daylight ratio recommended by the British Committee, is amply justified on the grounds of (a) reliability proved by long experience, (b) applicability to all countries.

It remains to be seen whether the methods by which such standards can be applied are convenient for use by architects and legislators.

DAYLIGHT ILLUMINATION AND TOWN PLANNING

By C. G. Moller (Architect, Budapest, Hungary)

THE designing of windows for adequate daylight illumination presents an entirely new problem to most architects. In Hungary, building bylaws give some simple rules as to the minimum size of windows

compared to the floor area of the room, but any simple rule is liable to break down on account of the difficulty of the problem.

There is no established good practice in the size and arrangement of windows; architects following tradition are apt to use inadequate fenestration; modernistic designers very often overdo the size of windows, creating glasshouses instead of well-lit apartments and offices.

Scientific design of windows should be made familiar to architects, as proper daylight illumination is one of the most important factors, both hygienically and financially, in the use of a building.

Luckiesh quotes cases where the improvement of deficient illumination resulted in an increase of 79 per cent. of the output, in a decrease of 71 per cent. of rejected products and of 60 per cent. of accidents. But we cannot join him in advocating factories without windows or skylights, depending entirely on "constant well-distributed" artificial illumination and ventilation. Apart from the beneficial psychologic and physiologic effects of daylight, artificial illumination is—at least in our country—very expensive.

In Budapest yearly, with 250 workdays of ten hours each, the current for a lamp of 100 w. costs approximately 100 pengös = £3 11s.—whereas the heat-losses caused in winter by a 1 sq. m. single-glazed window amount to 3s. 6d., and those for a double-glazed window to 1s. 6d. only.

On the other hand, windows are much more expensive than any wall structure. A sq. m. of 1½ brick wall, plastered on both sides, costs 16 pengös = 11s., and a sq. m. of double window with rolling blinds, glazed with flat-drawn glass, costs 100 pengös = £3 11s. Large size windows in sunny aspects are also apt to lead to the overheating of rooms. Thus an upper limit of window size is commending itself.

We know of methods for determining approximately the daylight illumination. I say approximately, as in all methods known a series of variables we cannot easily get at are simply disregarded, and in the best case replaced by a "coefficient of ignorance." Nevertheless, as the faults are in many instances of sensibly the same magnitude, comparative values may be obtained with fair accuracy. A better knowledge of the "environment factors" and of the determination of indirect illumination is still needed, but the information already available is sufficient to be a practical guide to architects.

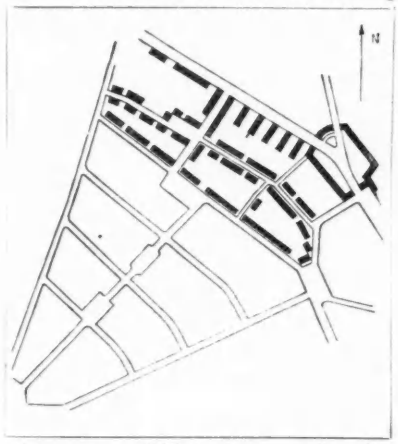


Figure one. Old development plan of Dürrenberg (Germany).

But what can illumination experts and architects do in cases where building bylaws and common practice allow the erection of high houses in narrow streets, of narrow courts and light shafts, making proper daylight illumination for lower stories quite impossible?

Here the town-planner comes in. He has to provide, in collaboration with the illumination expert, for the possibilities of adequate diurnal illumination.

The author then exposed the problem of daylight illumination with reference to the Budapest building regulations, which he divided into two headings under: (*a*) Actual conditions, (*b*) What is to be done? Regarding the latter, he said:

I should like to press the point that a town planning expert cannot be satisfied with merely ensuring proper illumination for all rooms; he has to set himself a higher aim in ensuring *direct sunlight*, for all dwelling-houses, hospitals and for corridors, at least in schools.

This is easily done in giving all the secondary streets an approximately north-south direction, so that all dwelling rooms should face east or west, the main arteries keeping their direction determined by traffic conditions and other considerations (figures one and two). According to A. Rey, the French town planning scientist and his astronomical collaborator, if the light and heat radiation should be equally distributed to both sides of the street, the direction of same should at Paris deviate + 19° from the north-south line. He calls this direction the heliothermic axis. Given the great economy in heating derived from sun radiation, I myself advocate the setting out of streets parallel to the heliothermic axis. In east-west streets one side gets an excessive sunshine, while the other obtains practically none.

Reflected light should be given more consideration. Having visited London, I quite agree with Mr. Waldram that there the coefficient of reflection of buildings is very low. But in brighter climates, with less smoke pollution, light reflected from the buildings opposite and from the walls and ceilings inside a room is not to be neglected.

As to the latter, at my desk 1·70 m. from the window, the indirect illumination is 28 per cent. of the total illumination on a dull day, whereas in the most remote point from the window indirect illumination is greater than the direct illumination. Applying these experiences to building bylaws, provision should be made for the compulsory maintenance of reflective surfaces where necessary.

I should be glad if I could draw your attention to the connecting points necessitating a close collaboration of illumination and town planning experts.

DAYLIGHT ILLUMINATION OF ART GALLERIES WITH OVERHEAD LIGHTING

By T. Hirayama (Assistant Professor of the Tokyo Imperial University)

TO ascertain the most satisfactory intensity of illumination in an art gallery, the following measurements were taken at an exhibition of the Imperial Academy of Art last year (1930). Inspectors, critics, architects, amateurs, and a number of students of the Imperial University estimated the amount of illumination at each picture. At the same time we measured the intensity of illumination at the surface of each picture with the illuminometer.

The intensities of illumination ascertained by these observers, who were forty in number, were 148 lux in the case of Japanese paintings and 87 lux in the case of oil paintings and water-colour paintings. Therefore, the average intensity of illumination suitable for an art gallery should be considered as 118 lux.

From the measurements made in existing galleries generally considered as adequately lighted, it may be concluded that an intensity of illumination of about 120 lux on the wall represents a satisfactory standard.

To obtain a suitable measure of illumination in an art gallery, i.e. about 120 lux, the sill ratio must be variable

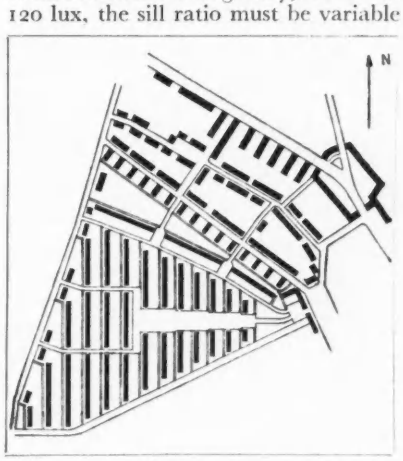


Figure two. New development plan of Dürrenberg. Alex Klein, Architect.

D

from 10·4 per cent. in the evening to 1·0 per cent. at the brightest hour of the day. It has been found that the most satisfactory lighting is obtained with an area ratio between the skylight surface and the floor surface of about 0·25; it is also found that the maximum sill ratio is about 10 per cent., and that the minimum sill ratio is about 1·0 per cent.

HOME LIGHTING

By Caroline Haslett and Nora E. Miller

ANY serious campaign to raise the standard of home lighting would have its effect on the building industry. At present the lighting question receives too little consideration. Even in the homes of the wealthy, the architect is too often given entire responsibility for the lighting arrangements, the purchaser requiring to be consulted only in respect of the fittings and any special lighting arrangements. In regard to the vast majority of middle class homes, however, the lighting question is hardly considered, the electrician often merely contracting to put in a certain number of points for the builder at the lowest possible price. In too many cases the purchaser is content to leave it at that, until the question of buying the decorative fittings arises. Careful consideration and discussion of the wiring installation before approval of the building plans would subsequently bring its reward in the home in the form of comfortable and useful lighting.

During the past fifty years, the progress of illumination in the home has been wonderful, but with the more rapid education of the public, and the greater co-operation of the engineer and the artist, the development in the next ten or twenty years should be absolutely revolutionary.

Modern architecture and decoration encourage original ideas in illumination; modern art, probably more than anything else, stimulates the use and appreciation of good lighting.

Rooms which are architecturally and decoratively pleasing are enhanced by harmonious lighting effects, while they would be entirely spoiled by incorrect lighting. One of the best ways of interesting women in domestic lighting is by means of novelties in the form of electric light ornaments and decorative fittings. Interest in these soon leads to a greater appreciation of lighting possibilities, and the desire for decorative lighting as well as good general illumination.

LITERATURE

STRESS DIAGRAMS AND DRAWING-OFFICE PRACTICE

THE principles of graphic statics, like those of the slide rule, although simple in themselves, often present unexpected pitfalls for the student who attempts to apply them to the calculations of an unfamiliar structure. Both must be thoroughly mastered before they become obedient servants, and mastery only comes by much practice. The mathematician may be scornful of the graphic method as one that cannot exclude errors up to two places of decimals, and which depends for accuracy entirely upon the skill of the draughtsman and the delicacy of the drawing instruments used. But graphic statics have the advantage of disclosing any serious error in the design of the structure for which the calculations are being made by the visible impossibility of closing the polygon of forces, and are therefore a useful check, even when the calculations have been made mathematically.

As so much depends upon the accuracy of the drawing, the author has divided his book into two parts. Part I deals with drawing instruments and their use, and is intended for beginners. Some readers may be impatient at being told how to sharpen a pencil when they itch to calculate a Warren girder, but Mr. Digweed is wiser than they and knows how closely the accuracy of the calculation is bound up with the fineness of the lines drawn and the proper handling of the set square. The remarks on drawing-office practice in this section, however, seem more applicable to the routine of an engineer's than an architect's office.

Part II comprises some thirty problems in graphic statics, ranging from the determination of the forces in a simple triangular frame, to the calculations of the stresses in girders and cranes. Each example is carefully worked out and the illustrations in the text show clearly the methods by which the stress diagrams are built up; any student who has mastered them will have obtained a good working knowledge of the subject and be able to solve most of the problems that are likely to arise in general practice. It might have been useful to include an example of the method of calculating the stresses in buttresses and retaining walls, and also to have expanded the notes on roof trusses sufficiently to show how wind pressure and loads may be combined in a stress diagram, and to have omitted some of the less usual types of girder construction; but the book should prove a real help to beginners, who are more frequently confused than helped by the multitude of examples given in the larger standard works on the subject.

LL. E. W.

Stress Diagrams and Drawing Office Practice. By E. N. Digweed, A.M.I.MECH.E. London: Williams and Norgate, Ltd. Price 8s. 6d. net.

MODERN BRIDGE CONSTRUCTION

IN *Modern Bridge Construction* the author has, in the short space of some 230 pages, successfully condensed the essentials of the one hundred odd subjects, for information on which the bridge engineer has usually to refer to at least one-half that number of different textbooks.

Illustrated by excellent diagrams, the volume is written in a style which makes easy and attractive reading, due to a large extent to the absence of those irritating interruptions so often caused in works of this nature by the inclusion of pages of intricate mathematical argument.

When mathematics are necessary, as they must be when one is dealing with a subject which is largely technical, the working formulæ, with which the practical engineer is mainly concerned, are established in a clear and concise manner, and in many instances a practical example follows.

In the opening pages the reader will find one chapter dealing with an obsolescent type of construction—the masonry bridge. Commensurate with the importance of the subject, the next five chapters are devoted to fixed steel girder and steel arch bridges, while the two following chapters treat the structural and mechanical aspects of movable steel bridges of various types in a thorough and interesting manner.

The problems of erection and fieldwork are also dealt with, and in this connection the author has been able to devote a number of pages to the problem of constructing underwater foundations. The method of constructing such foundations by sinking caissons, and the application of compressed air to such work, are explained with great clearness and detail, and a table of useful data on cylinder sinking is appended.

The factors which determine the choice of a method of erection of a bridge superstructure are then explained by the author, and the procedure adopted on a number of important bridge contracts also described.

The book concludes with an interesting, if somewhat short, chapter on suspension bridges.

It has been the author's principal aim to serve the needs of the average civil engineer rather than those of the bridge specialist, while the needs of the civil engineering student, whose curriculum includes bridge engineering as one of many subjects, have been kept in view.

In these respects the author has certainly achieved his object, but, in the pages of *Modern Bridge Construction*, the specialist also will find much useful information and very pleasant reading.

J. B.

Modern Bridge Construction. By S. Johnstone Taylor. London: Crosby Lockwood and Son.

COMPETITIONS OPEN

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions, etc., obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1. 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

LOAMY SAND

S. J. V. writes: "*Textbooks, both as regards materials and on general building supervision, usually state that sand for building purposes should be entirely free from loam. While I appreciate that clean sand is necessary for good work, many rules given in textbooks are not carried out in practice. On many building works sand containing a certain amount of loam is observed, and builders generally consider that a little of this is necessary to make a good mortar. Do the views given by authorities on this matter lean too much towards theory?*"

It is essential, to obtain a strong mortar or concrete mixture, to use clean sand free from dirt or loam, and loam is an impurity.

Clean sand is usually asked for in specifications, and if loamy sand is submitted it should be washed.

Builders are not keen on washing sand: it costs money; and they are sometimes persuasive as to the necessity of loam in sand.

Loamy sand works fat when mixed with cement or lime, with a saving in the use of the latter materials and in labour.

This is especially so in cement mortar, which works hard and gritty, and in which bricklayers prefer to add lime to assist in easier manipulation.

I was speaking to a builder recently who said that he was using cement mortar in lieu of lime mortar gauged with cement on some works. I was rather puzzled by his preference for a mixture which would involve extra expense.

I found that whilst he was obtaining cement at a cheaper rate than current prices, he was using loamy sand, and he admitted that it would not have been worth while as regards cost of labour to use cement mortar if he had to use clean sand. If sand is washed on the site, water should be passed through it, and it should not be washed in a tub, where water is not frequently changed, and the loam settles on top and mixes again with the washed sand.

W. A. D.

ANNOUNCEMENT

Mr. C. B. Willcocks, F.R.I.B.A., and Mr. J. R. Greenaway, F.S.I., of 11 Friar Street, Reading, have dissolved partnership by mutual consent. They will continue in separate practices, in different offices, at the same address; Mr. Willcocks as an Architect and Surveyor (telephone number Reading 644), and Mr. Greenaway as a Quantity, Building and Land Surveyor (telephone number Reading 2860).

THE ARCHITECTS' DIARY

WEDNESDAY, SEPTEMBER 9

SANITARY INSPECTORS' ASSOCIATION. Annual Conference to be held at Bridlington. Until September 12.

INTERNATIONAL ILLUMINATION CONGRESS. At Sheffield. Visits to various buildings.

THURSDAY, SEPTEMBER 10

INTERNATIONAL ILLUMINATION CONGRESS. At Buxton. Following are some of the papers to be read. Morning Session, 10 a.m. Section 1: "Architectural Lighting," by R. Waldo Maitland and Howard Robertson, F.R.I.B.A. Afternoon Session, 2.30 p.m. Section 2: "Architectural Lighting," by L. Kalff; "Engineering Aspects of Architectural Lighting," by W. J. Jones. **10 a.m.**

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 16.

FRIDAY, SEPTEMBER 11

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Sessions at 10 a.m. and 2.30 p.m. Papers to be read will be mainly devoted to signal glasses and vehicle lighting. **10 a.m.**

ARCHITECTURAL ASSOCIATION. Annual Excursion: to Austria. The programme will include six days in Vienna, followed by a six days' motor coach tour through Austria, returning to London on September 26.

SATURDAY, SEPTEMBER 12

Sunrise, 6.28 a.m. Sunset, 7.24 p.m.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

INTERNATIONAL ILLUMINATION CONGRESS. At Birmingham. Whole day motor coach tour to Stratford-on-Avon and the Shakespeare country.

SUNDAY, SEPTEMBER 13

INTERNATIONAL ILLUMINATION CONGRESS. At Cambridge. Until September 19.

TUESDAY, SEPTEMBER 15

Closing date of THE ARCHITECTS' JOURNAL September Holiday Sketches Competition.

WEDNESDAY, SEPTEMBER 16

INSTITUTION OF STRUCTURAL ENGINEERS. Visit to the Shipping, Engineering and Machinery Exhibition at Olympia.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Manchester and District Branch. Visit to the Wardle (Watergrove) Reservoir.

FRIDAY, SEPTEMBER 18

NATIONAL SMOKE ABATEMENT SOCIETY. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19

Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

MONDAY, SEPTEMBER 21

INTERNATIONAL ILLUMINATION CONGRESS. Reception of the delegates at the Royal Institution, London. 3 to 4.30 p.m. **3 p.m.**

TUESDAY, SEPTEMBER 22

INTERNATIONAL ILLUMINATION CONGRESS. Conference of the Institution of Electrical Engineers, at the Kingsway Hall, W.C. 10.30 a.m. Conversaziones at the Royal Institution and the Albert Hall. 8 p.m. **10.30 a.m.**

WEDNESDAY, SEPTEMBER 23

R.I.B.A. STATUTORY EXAMINATION. Latest date for submission of applications for examination for the office of district surveyor. (Fee £3 3s.)

INTERNATIONAL ILLUMINATION CONGRESS. Faraday Exhibition Private View, Albert Hall. 10 a.m. to 4 p.m. British Association Centenary meeting. Delegates' Reception, Albert Hall. 3 p.m. Gen. Smuts (President, British Association) opens the Exhibition, Albert Hall. 4.30 p.m. Presidential Address to the British Association by Gen. Smuts, at the Central Hall, Westminster, S.W.1. 9 p.m. **10 a.m.**

INSTITUTE OF FUEL. At the Chemical Society's Premises, Burlington House, W. "The Reactivity of Coke. A Report to the Blast Furnace Committee, Iron and Steel Industrial Research Council." By J. G. King and J. H. Jones. **6 p.m.**

THURSDAY, SEPTEMBER 24

INTERNATIONAL ILLUMINATION CONGRESS. Garden Party at the National Physical Laboratory, Teddington. 3 to 6 p.m. Soirée at the Royal Society, Burlington House, W. 8.30 p.m. **3 p.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Newcastle. "Modern Decoration." By John Gloag and Mrs. Grace Lovat Fraser, F.I.B.D.

FRIDAY, SEPTEMBER 25

INTERNATIONAL ILLUMINATION CONGRESS. At the Dorchester Hotel, Park Lane, W. Dinner given by H.M. Government to representative delegates and guests. Chairman: The Rt. Hon. Ramsay MacDonald, P.C.

TUESDAY, SEPTEMBER 29

R.I.B.A., 9 Conduit Street, W.1. Exhibition of drawings, including the whole of the British Section of the recent exhibition held in Berlin during the Congress of the International Federation of Housing and Town Planning.

LAW REPORT

DISPUTED RIGHTS OVER A DIVIDING WALL

Davis v. *Pepper. Chancery Division. Before Lord Justice Romer*

THIS was an action which had reference to the ownership of a dividing wall at Piccadilly, Hanley, Staffs., the plaintiff being Mr. A. S. Davis, of 67 Piccadilly, who sought a declaration against the defendant, Mr. J. Pepper, owner of adjoining property in Piccadilly, that he had trespassed on a wall which abutted on a passage-way which divided his and defendant's property, by cutting away portions of the wall, into which he had inserted girders or supports.

Mr. Archer, K.C., for the plaintiff, said that the plaintiff also sought relief by way of injunction to restrain alleged trespass. The point in the case was: Was this a party wall or not? The defendant alleged that it was. Each had purchased from a common owner, and the plaintiff's case was that the wall was his entire property. Plaintiff's plans showed that, without touching the wall, the defendant had had conveyed to him his full extent of property. Plaintiff had a right of way over the passage which ran alongside the wall, and he used it as a back way to his shop. What plaintiff complained of was that the defendant was putting in girders in the wall in order to extend his shop, with the result that the burden on the wall would be increased as much as eight times, and as it was only eight or nine inches thick, the plaintiff feared that it might do injury to his property.

Mr. R. T. Longden, architect and surveyor, of Messrs. Longden and Venables, called on behalf of the plaintiff, stated that he surveyed the property when plaintiff made certain alterations, and he came to the conclusion that the wall was the property of the plaintiff, though right of support for it was with the defendant.

Mr. G. O. Slade, for the defendant, argued that the wall was a party wall and what defendant had done was not beyond his legal rights.

Mr. H. Goldstraw, architect, of Messrs. Wood and Goldstraw, Stoke-on-Trent, was called on behalf of the defence and expressed the opinion that the wall was a party wall.

His lordship, after hearing the arguments of counsel, dismissed the action with costs, and held that the wall was a party wall, the plaintiff having failed to discharge the onus which rested upon him of proving that the wall was in 1919 assured to him. Here the plaintiff had contended that the defendant had no interest at all in the wall. But it was obvious that if the plaintiff were right the defendant must have numerous easements over the wall. His lordship could not conceive what possible damage plaintiff could have suffered or would suffer by reason of anything the defendant proposed to do. Nevertheless, the plaintiff was entitled to a declaration if the wall did belong to him. It seemed to him improbable, having regard to the state of the premises in 1919, that the wall should have been conveyed to the plaintiff, and not have been treated as a party wall, which apparently it was. He granted defendant an inquiry as to damages.

TRADE NOTES

On the occasion of the sixth anniversary of the foundation of Messrs. Mortimer, Gall & Co., Ltd., electrical and illuminating engineers, of 26 Cheapside, E.C.2, a party of architects, engineers and friends, at the invitation of the firm, made a charabanc tour of London, in order to see the illumination of the various buildings. Prior to the tour, the party visited the model theatre at Messrs. Holophane's, Ltd., premises, in Elverton Street, Westminster, S.W.1, where an interesting demonstration of the application of the latest conceptions of scientific illumination was given, interspersed with descriptions by Mr. H. Gillespie Williams.

*

A leaflet showing the twelve coloured cements which constitute the standard range now supplied by the Cement Marketing Co., Ltd., of Portland House, Tothill Street, Westminster, S.W.1, has recently been issued. It is stated that during the last two years the following cements have been placed on the market: Snowcrete; Snowcrete No. 2 cream (the cement used for the facing slabs of the Dorchester Hotel); Snowcrete No. 3 light cream; and Colorcrete, a rapid-hardening Portland cement, supplied in two shades, buff and red. Additional coloured cements are also available, the colours of which are illustrated in the leaflet. These illustrations are actual photographic reproductions of slabs made with the particular cements referred to, mixed with the special white aggregate supplied by the firm. It is pointed out that it is essential that a suitable aggregate be used in order that the finishes obtained by the use of these cements may possess full brilliancy of colour and evenness of texture. To secure the best results, these cements (with the exception of the black) are also sold with the special white aggregate ready mixed in suitable proportions for rendering. In addition to giving perfectly even and permanent tones in the concrete, the use of these mixtures, it is claimed, eliminates the difficulty in obtaining a suitable aggregate, whilst the need for storing two separate products on the site, with the consequent greater risk of contamination by dirt, is also obviated. Special coloured cements can also be made to meet customers' requirements. Sample pats will be forwarded on application to the Cement Marketing Co., Ltd., at the address given above.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

New Grignon Hall, Felsted, Essex (pages 331–335). General contractors, Walden and Sons. Sub-contractors: W. H. Collier & Co., facing, common, and purpose-made moulded window bricks, and roofing tiles; Wm. Aumonier and Sons, stone carving; T. S. Knight and Sons, heating engineers; Tyler and Freeman, electric lighting; H. H. Martyn & Co., Ltd., fibrous plaster work; Matthew T. Shaw & Co., Ltd., constructional steelwork; C. E. Welstead, Ltd., metal casements; Clubb and Son, wrought-iron and copper-gilt weather vane; Ewart and Son, Ltd., copper roofing, etc.; Comyn Ching & Co., Ltd., bronze radiator surrounds; A. Jones Lock Co., Ltd., ironmongery; Art Pavements and Decorations, Ltd., terrazzo paving; Acme Flooring and Paving Co., Ltd., oak block flooring; Chater and Sons, Ltd., Copperlite glazing; Higgins and Griffiths, Ltd., electric light fittings; Stoner and Saunders, cast lead rainwater heads, etc.; Synchronome Co., Ltd., clock.

King George Hospital, Eastern Avenue, Ilford, Essex (pages 339–342 and supplement). General contractors, Ashford Builders' Co., Ltd. Sub-contractors: Limmer and Trinidad Asphalt Co., Ltd., asphalt; Kleine Co., Ltd., reinforced concrete; James Brown (Brentwood) (1919), Ltd., facing bricks; Bath and Portland Stone Firms, Ltd., stone; Girlings Ferro-Concrete Co., Ltd., artificial stone; Sanders and Forster, Ltd., structural steel; Hollis Bros. & Co., Ltd., wood-block flooring; Marbolith Flooring Co., Ltd., patent flooring; Colley, Meikle & Co., Ltd., central heating; Bratt, Colbran & Co., Ltd., stoves and grates; Davis Gas Stove Co., Ltd., cooking installation; D. Paxman & Co., boilers; J. Briggs & Co., Ltd., lighting, power and equipment; Shanks & Co., Ltd., sanitary fittings; Carter and Aynsley, Ltd., door furniture; James Gibbons, Ltd., casements; E. Shipton & Co., Ltd., telephones; Milners Safe Co., Ltd., fireproof doors; F. A. Norris & Co., iron staircases; S. W. Farmer and Son, Ltd., main gates, railings and balustrades; W. Hitchins & Co., board-room and entrance hall panelled dadoes and hospital-type doors; J. Bysouth and E. J. and A. T. Bradford, carving stonework; Fenning & Co., Ltd., marble; E. Parkinson (London), Ltd., tiling; Bratt Colbran & Co., Ltd., mantels; Hobart Manufacturing Co., Ltd., electrical food-preparing machine; Hammond Bros. and Champness, Ltd., lifts; Landis and Gyr, Ltd., synchronized clock; Gent & Co., turret clock; South Essex Water Co., Ltd., water supply; Wallington Jones & Co., Ltd., cold stores; May Oil Burner (England), Ltd., oil burners; Carl Zeiss (London), Ltd., lighting in operating theatre; Moler Products, Ltd., Fosalsil partition blocks.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Essex Education Committee has purchased a site in BARKING for the erection of a secondary school.

The governors of the Sir John Cass Technical Institute, CITY OF LONDON, have purchased property for extensions.

The Essex Education Committee has purchased land for the extension of the EPPING secondary school.

The Essex C.C. is seeking sanction to borrow £48,000 for the provision of a nurses' home at the EPPING and ROMFORD institutions.

The Ealing Education Committee is to erect a senior block at the Stanhope school, GREENFORD.

The GREENWICH Borough Council is to erect a welfare centre and sunlight clinic in Chevening Road.

The Essex Education Committee is seeking sanction for a loan of £13,500 for the erection of an elementary school in Suttons Lane, HORNCHURCH.

The L.C.C. is to erect a school for 450 girls on the Bellingham estate, LEWISHAM.

Mr. W. D. Caroe has prepared plans for the erection of a new church at MUSWELL HILL.

The L.C.C. is to erect a trade school in Cassland Road, SHOREDITCH.

The Essex Education Committee is seeking sanction to borrow £8,000 for the enlargement of the SOUTH BENFLEET council school.

The L.C.C. is to erect a new wing at the WANDSWORTH technical institute.

SOUTHERN COUNTIES

The DARTFORD U.D.C. is to erect a further 128 houses on the Heath estate.

Plans passed by DARTFORD U.D.C.: Four houses, off Dover Road, for Mr. W. F. Summers; shop premises, 50–2 High Street, for Messrs. Boots, Ltd.; bungalow, Kiln Lane, for Mr. W. Kerslake; six houses, Princes Road, for Messrs. H. C. Wright & Co., Ltd.; fourteen bungalows, Summerhouse Drive, for Messrs. Payne & Co.; two houses, Heath Close Road, for New Ideal Homesteads, Ltd.; bungalow, Heathlands Rise, for Mr. G. H. Giles; extensions, Lowfield Street, for Messrs. Perry Son and Lack, Ltd.

Plans passed by the EASTBOURNE Corporation: 124 houses, Kingston Road, and new road for Messrs. P. D. Stonham and Son, on behalf of Messrs. P. and G. Attfield; private school, Longland Road, and six houses, Osborne Road, and other roads, for Mr. A. Ford; squash rackets court, Devonshire Park, and twelve houses, Hempden Park, for Mr. J. C. Bowley.

The GODALMING Corporation is to erect 100 houses on the Eashing estate.

SOUTH-WESTERN COUNTIES

The ANDOVER R.D.C. is considering the erection of twelve houses at Upper Clatford.

The BASINGSTOKE U.D.C. is to erect 118 houses in Worting Road.

The BASINGSTOKE R.D.C. is considering a housing scheme for the Bramley parish.

The CHRISTCHURCH (HANTS) R.D.C. has in contemplation the erection of sixteen houses at Highcliffe and rural housing schemes for Thorney Hill and Bransgore.

The Hampshire C.C. has prepared plans for extensions at the CRABWOOD smallpox hospital.

The PETERSFIELD R.D.C. is to erect sixty or seventy houses during the next three years.

Plans passed at POOLE: House, Tatham Road, for Mr. J. Frances; house, Osmund's Road, for Mr. S. Gidlow; four houses, Highland Road, for Mr. G. Manners; two houses, Mellstock Road, for Mr. F. W. Spratley; house and garage, Highland Road, for Mr. E. F. Knight; house, Anthony's Avenue, for Mr. F. Wyatt; house, Enfield Road, for Messrs. L. J. Newell and Sons; house and garage, Widdicombe Avenue, for Mr. C. W. Willis; house, Danecourt Road, for Mr. R. Thorne; two houses, Castledene Road, for Messrs. Brailsford and Wood; two houses, Stanley Green Road, pair of semi-detached houses, Lulworth Avenue, and house, Gorse Hill Road, for Mr. H. Kendall.

The ROMSEY U.D.C. has purchased a housing site where it will be possible to erect 100 houses.

The ROMSEY R.D.C. is to erect twenty-four houses in Lockerley and eight in Braishfield.

The Fareham R.D.C. is to erect twelve houses at SALISBURY and twelve at TITCHFIELD.

MIDLAND COUNTIES

Mr. L. F. Smith has prepared plans for the BELPER U.D.C. for the erection of fifty-four houses on the Whitmoor estate.

The BRIERLEY HILL U.D.C. is to erect 192 houses on the Buckpool estate.

The HINCKLEY R.D.C. is to erect twenty houses at Barwell.

The Warwickshire C.C. has prepared revised plans for the erection of a petty sessional court-house at SOLIHULL.

The NUNEATON Corporation has passed plans for the erection of a cinema in Lister Street, from plans prepared by Messrs. H. Mayo & Co.

The WOLVERHAMPTON Justices have granted a licence in respect of a new cinema to be erected for Associated British Cinemas, Ltd., on the Agricultural Hall site.

NORTHERN COUNTIES

The BIRKENHEAD Corporation proposes seeking sanction to borrow £71,630 for the new cemetery at Landican, including the provision of chapels, crematorium offices, etc.

Messrs. T. T. Wainwright and Son are to develop the Manor Hill estate, BIRKENHEAD.

Mr. H. C. Davies is to erect houses in Prenton Road East, BIRKENHEAD.

The BIRKENHEAD Corporation is making an offer for the purchase of land on the Grangetown estate, for the erection of offices, etc., for the Health Department.

The BIRKENHEAD Corporation is seeking sanction for a loan of £14,000 for improvements at Woodside station, the ferry approaches, and the enlargement of the car park.

The BIRKENHEAD Corporation is seeking sanction to borrow £45,000 for the construction of a new bridge over the railway in Chester Street.

Plans passed by the BOLTON Corporation: Ten houses, Old Kiln Lane, and sixteen houses, Chorley New Road, for Messrs. T. P. Smith, Ltd.; one shop and four houses, Thorns Road, for Mr. W. E. Yates; ten garages, Lovalle Street, for Messrs. S. Newsome and Sons; two houses, Plodder Lane, for Mr. John S. Highes; 112 houses, Owndes estate, for Corporation Estates Committee; development of the Shiptons estate, for the Exors. of E. P. Ormond; shop and house, Church Road, for Mr. W. A. Whittle.

The BOLTON Corporation has obtained sanction to borrow £40,240 for the erection of 112 houses on the Lowndes Street estate, and £25,000 for the erection of seventy-two further houses on the Higher Swan Lane estate.

The GATESHEAD Corporation is to proceed with the erection of baths, at a cost of £75,000.

The HARTLEPOOL Corporation has under consideration the erection of 500 houses so that various slums may be dealt with.

The Roman Catholic authorities are to erect a school for 300 juniors in Southcoates Lane, HULL.

The LEEDS Corporation has obtained sanction to borrow £12,650 for the purchase of property in Union Street, required for the future extension of the Kirkgate market.

The MANCHESTER Education Committee is arranging for the provision of school sites on the Wythenshawe estate.

The Board of Education has approved the plans of the MANCHESTER Education Committee for the erection of new schools at Crowcroft Park and Victoria Avenue.

The MANCHESTER Education Committee has prepared plans for the erection of an elementary school at Bowker Vale.

The MANCHESTER Corporation has obtained sanction to borrow £50,000 for the extension of the Parr's Wood motor-bus garage.

The MANCHESTER Education Committee has approved plans for the new building for the Whalley Range High School on the Wilbraham Road site; and for additions at Christ Church municipal school, Hulme.

The Town Planning Committee of the MANCHESTER Corporation has sanctioned a proposal for the erection of a cinema on land adjoining the Newton Heath housing estate.

The MANCHESTER Corporation has passed plans for the erection of the Church of St. Nicholas, Kingsway, Burnage.

The MANCHESTER Corporation has approved the layout plans for the erection of the first thousand houses on the Wythenshawe estate.

The MANCHESTER Education Committee is to erect two elementary schools on the Wythenshawe estate.

The MANCHESTER Corporation is seeking sanction for a scheme for the provision of a new dining hall for officers and extensions to the mental block at the Crumpsall Hospital.

The West Riding Education Committee has obtained a site at MEXBOROUGH for the erection of a technical institute.

The NEWCASTLE Education Committee is to erect an elementary school on the Lonnen housing estate.

The PONTEFRACT Corporation is obtaining tenders for the erection of 132 houses, from plans prepared by Messrs. Tennant and Smith.

The WEST HARTLEPOOL Corporation is to extend the sea wall at Seaton Carew.

Plans passed by the SHEFFIELD Corporation: Alterations, "Rising Sun" Hotel, Abbey Lane, for Messrs. H. Tomlinson, Ltd.; two houses, Brooklands Avenue, for Mr. G. M. Taylor; two houses, High Storrs Road, for Mr. Riley Watson; four houses, Greystones Road, for Messrs. W. Malthouse, Ltd.; two houses, Ringinglow Road, for Mr. T. Blacktin; three houses, Ben Lane, for Mr. F. Lamb; two houses, Oakley Road, for Mr. H. C. Hornbuckle; four houses, Carterknowle Road, for Mr. H. Simpson; two bungalows, Essendene Crescent, for Mr. F. T. Walker; two houses, Folds Lane, for Mr. A. Yeardley; four shops and houses, Richmond Road, for Mr. J. W. H. Rowan; two houses and nine garages, Catliffe Road, for Messrs. W. and E. Sadler, Ltd.; four houses, Harley Road, for Mr. W. Green; shop and house, Common Road, for Mr. C. H. Peat; two houses, Manchester Road, for Mr. A. Spooner; Presbytery, Eccleshall Road, for the Rev. Canon Dolan; fifty-eight houses, Shiregreen estate and 22 Longley estate, for Corporation Estates Committee.

SCOTLAND

The Apostolic Church of Scotland is to erect a church in Hillview Street, GLASGOW.

The trustees of the Christian Brethren are to erect a hall in Smith Street, Whiteinch, GLASGOW.

The trustees of Cathcart U.F. Church are to erect a church at the corner of St. John's Road and St. James's Road, Cathcart, GLASGOW.

The GLASGOW Corporation is to erect thirty-six houses in Amulree Street, Tollcross.

The GLASGOW Education Committee has acquired ground for the erection of a gymnasium at the North Kelvinside secondary school.

The Y.W.C.A. has obtained a site in Tullis Street, GLASGOW, for the erection of a community centre for the Bridgeton district.

The GLASGOW Corporation has scheduled a site at West Scotstoun for the purpose of a country home for the health department.

Messrs. D. and J. R. M'Millan, architects, have prepared plans for the erection of a cinema at HUNTLY.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A_2	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . ,,	1 8
,, (Fixer) . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . ,,	9 6
¾" ,, ,, . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . . ,,	17 6
Rough boarding, ¾" . . ,,	1 6 0
,, 1" . . . ,,	1 0 0
,, 1¼" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	2/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:	TUBES. Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
	FITTINGS.		
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¼" . . . ,,	10 0
,, ,, ⅜" . . . ,,	9 9
,, ,, ½" . . . ,,	9 6
,, ,, ⅝" . . . ,,	9 0
,, ,, ¾" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Cnated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	3 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	3 10 0
Sand, washed . . . Y.C	17 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 0
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 3 . ,,		4 0
,, ,, ,, 7 . ,,		
,, ,, ,, 15 . ,,		6 0
,, ,, over 15 . ,,		,,
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add	3 0
If in underpinning	"	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving on flat	"	5 6
1" paving on flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
1½" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
½" do.	"	3 4 0
¾" do.	"	3 13 0
8" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
11" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	4 3
2" " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 [illegible]
2" " "	"	4 6
Extra only for moulded horns	Each	[illegible]
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1½" " but moulded both sides	"	3 6
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 9
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	"	2 0 6
Do. in covering to turrets, etc.	"	2 7 6
Do. in soakers	"	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " "	"	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from "	3 0

THE "NEUE WACHE" MEMORIAL, BERLIN

PLAN, SECTIONS AND DETAILS OF A SHRINE OF MEMORY WITHIN THE OLD GUARD-HOUSE

[*Professor Heinrich Tessenow, Architect.*

A GENERAL VIEW OF THE BUILDING: THE OUTER SHELL IS A CENTURY OLD

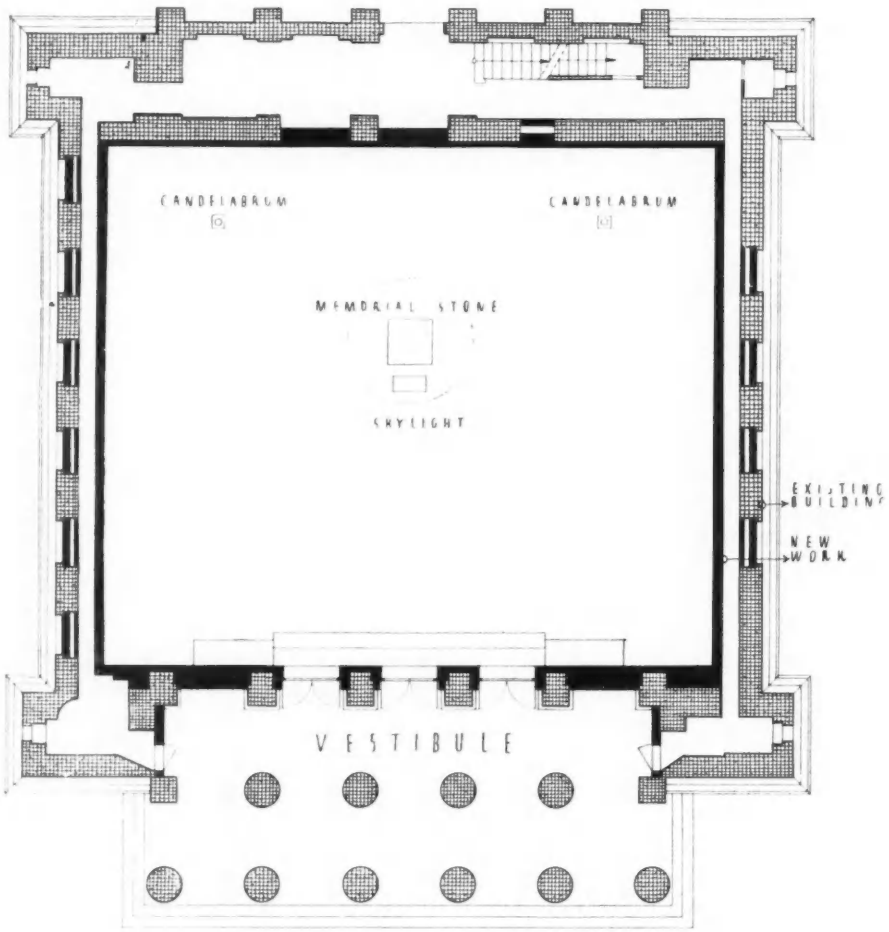
THE "Neue Wache" was built after the wars of the German Freedom in the years 1816-18, from designs by Carl Friedrich Schinkel, expressly as a post for the King's Guard. It was intended, in Schinkel's own words, to maintain the character of a monument and is, from its historical associations, its position in the most beautiful of Berlin squares and its architectural beauty, at once one of the most important national buildings of the country's capital. Since the end of the war it had stood empty. In 1930 the Prussian Government decided to complete it as a war memorial. A limited competition was organized between six nominated Berlin architects. Professor Heinrich Tessenow won the first prize. Executed from his designs, the building was formally opened in June, 1931.

Tessenow's conception was of an inner room, approached from the existing portico by three low grille doors, and thus visible from the nearby street. It is lit by an open circular top light in the centre of the ceiling. Thereunder, as beneath the open sky, stands the memorial stone, a large monolith of black Swedish granite. On this lies a wreath of oak-leaves, silvered and gilt, modelled by Professor Ludwig Gies. On either side, behind the stone, stand two candelabra of bronze with ever-burning flames.

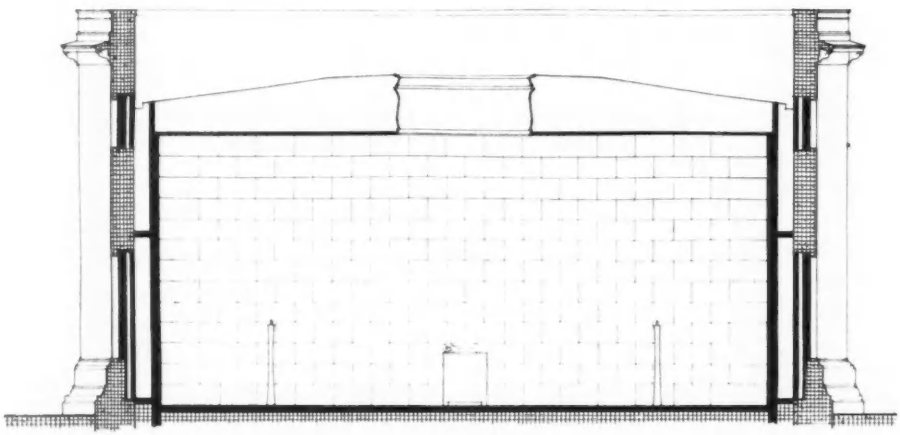
The walls are lined with slabs of limestone, the flooring is a mosaic of variegated large squares of Rhenish basalt, set in lead, and the ceiling is finished grey-white. From the black block which bears the wreath, the dark flooring, the grey walls and the light ceiling lead the eye successively to the opening in the ceiling, which again stands in close relation to the glittering wreath, the proper symbol and central point of the memorial.

By the wish of the architect the room is not, in general, open to the public, but spectators are intended to look in through the portico grilles. From this standpoint may be had the most impressive aspect; at the same time the intended aloofness of the memorial stone, as of an altar, is preserved.

WAR MEMORIAL IN THE "NEUE WACHE

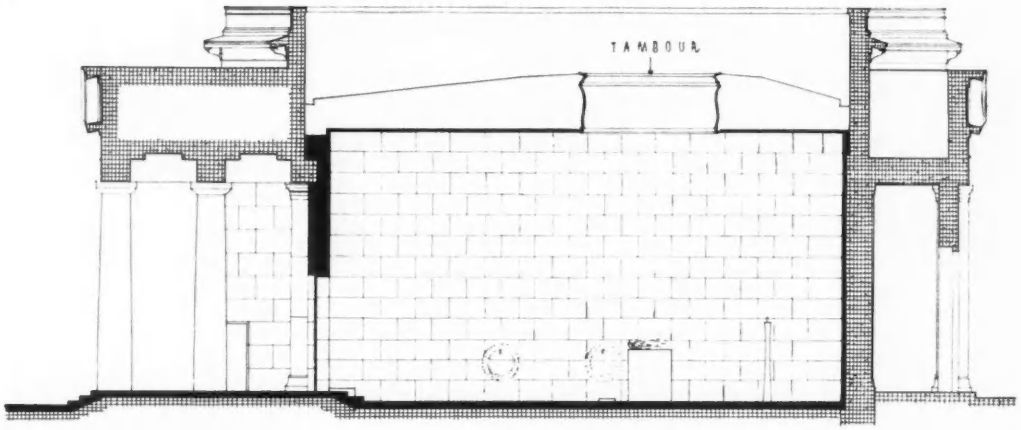


GROUND PLAN
SCALE 1/16" TO ONE FOOT

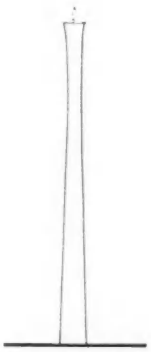


SECTION
SCALE • 1/16 IN TO 1 FOOT

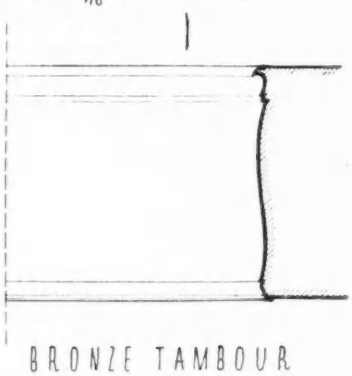
VACHE" BERLIN PROFESSOR DR. HEINRICH TESSENOW • ARCHITECT



SECTION
SCALE 1/16" TO 1 FOOT

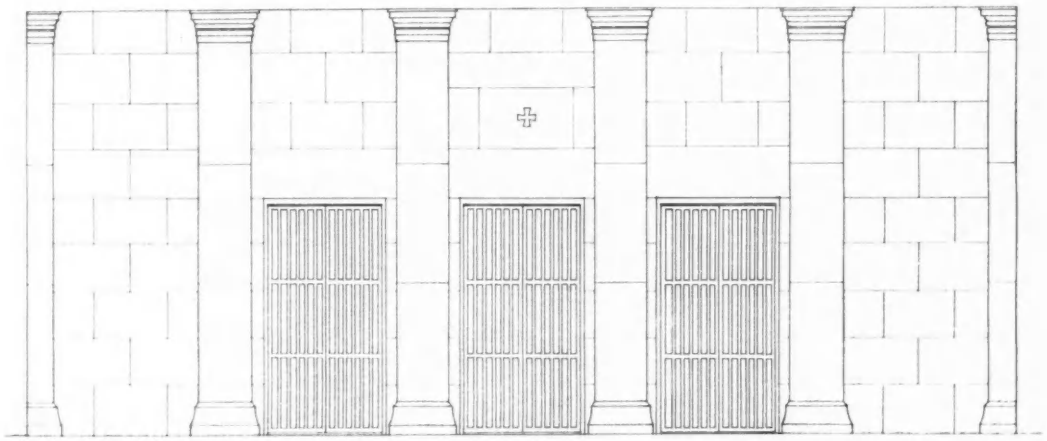


BRONZE CANDELABRUM



BRONZE TAMBOUR

SCALE 1/3 INCH TO ONE FOOT



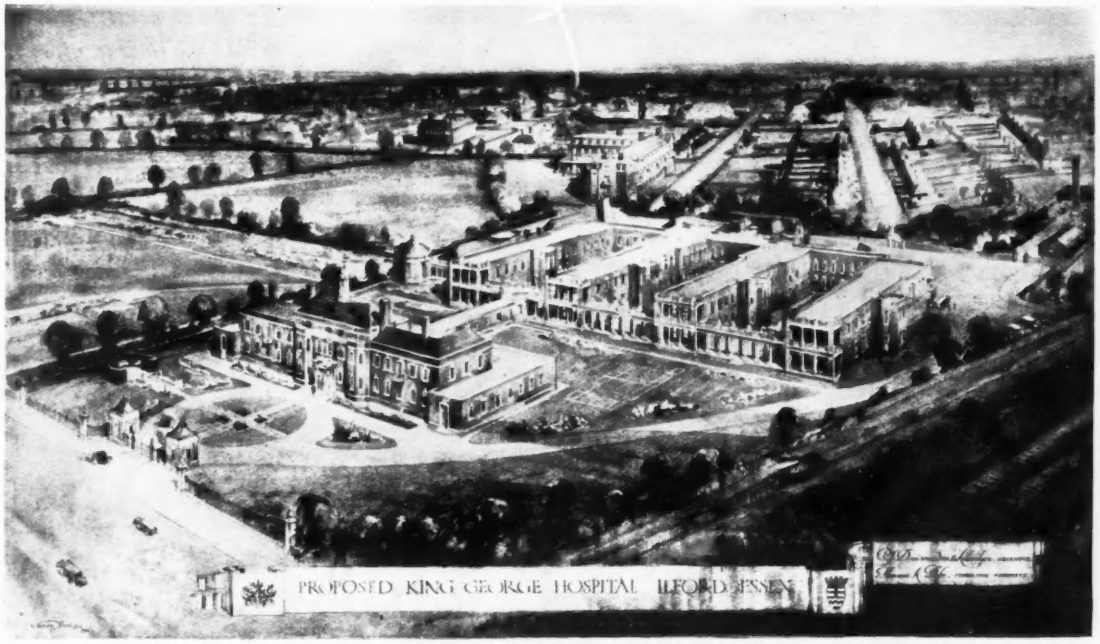
THE IRON ENTRANCE GATES SEEN FROM VESTIBULE
SCALE 1/8 IN TO 1 FOOT

[*Professor Heinrich Tessenow, Architect.*

THE BLACK MONOLITH WITH ITS OAK-LEAF WREATH

KING GEORGE HOSPITAL, ILFORD, ESSEX

OUT-PATIENTS' AND ADMINISTRATION DEPARTMENTS, WARD BLOCKS AND KITCHEN UNIT



[C. J. Dawson, Son and Allardyce, Architects. T. A. Pole, Consulting Architect.

PERSPECTIVE DRAWING OF COMPLETE HOSPITAL

THE perspective reproduced above should be studied in conjunction with the architects' block plan, which appears on the last page of this supplement. The main drive in to the hospital from Eastern Avenue leads to the out-patients' and administration department, behind which are five ward blocks.

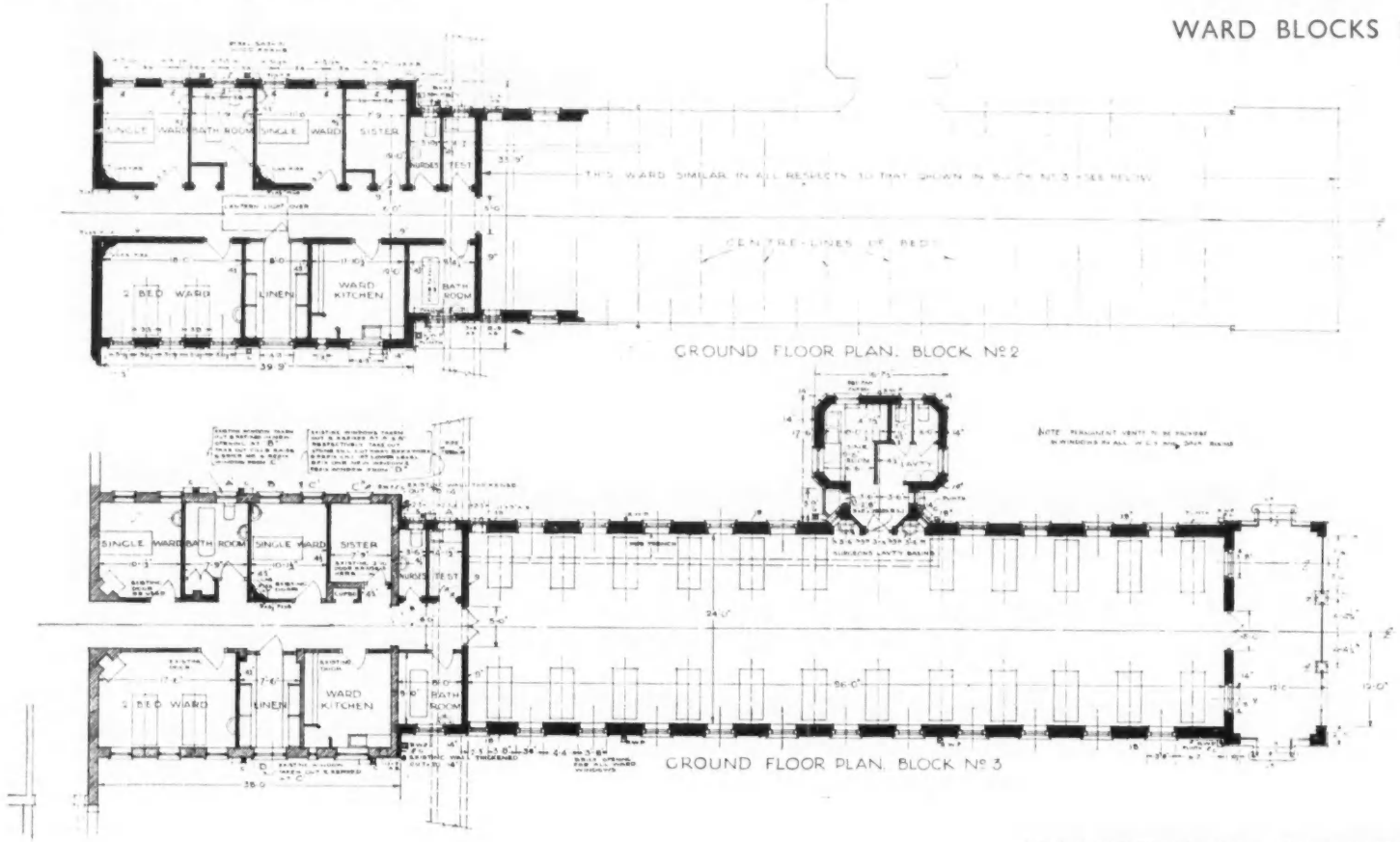
As will be seen from the plans on the following pages, the principal entrance hall to the hospital is in the centre of the out-patients' and administration block. Folding doors on three sides of the hall give access to the corridors leading to the out-patients' and X-ray departments and various rooms and staircases in the building, and also to the main connecting corridor of the hospital.

The out-patients' and X-ray departments are on the east side of the entrance hall, and comprise, among other accommodation, a separate entrance with patients' cloakrooms and a large waiting room with registration office.

On the first floor are a library and lecture room, a small chapel for the nurses, and the residential quarters of the matron, assistant matron and resident medical officers. On the second floor are further bedrooms and a sitting room, etc., for the residential staff.

Further illustrations and particulars of the hospital are given elsewhere in this issue of "The Architects' Journal."

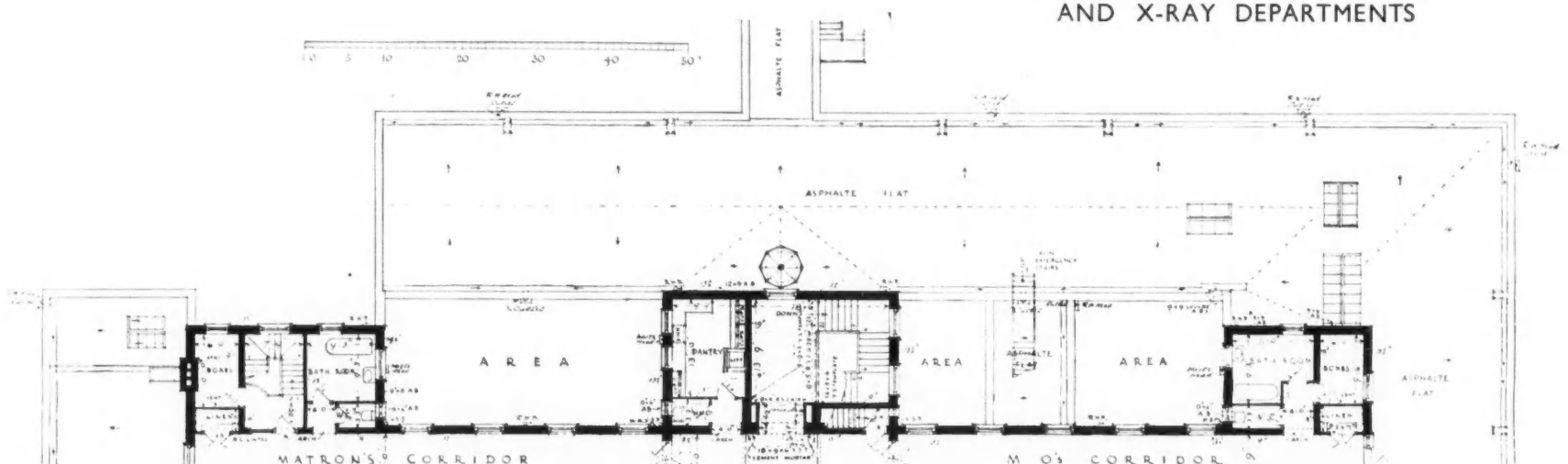
WARD BLOCKS NOS. 2 & 3

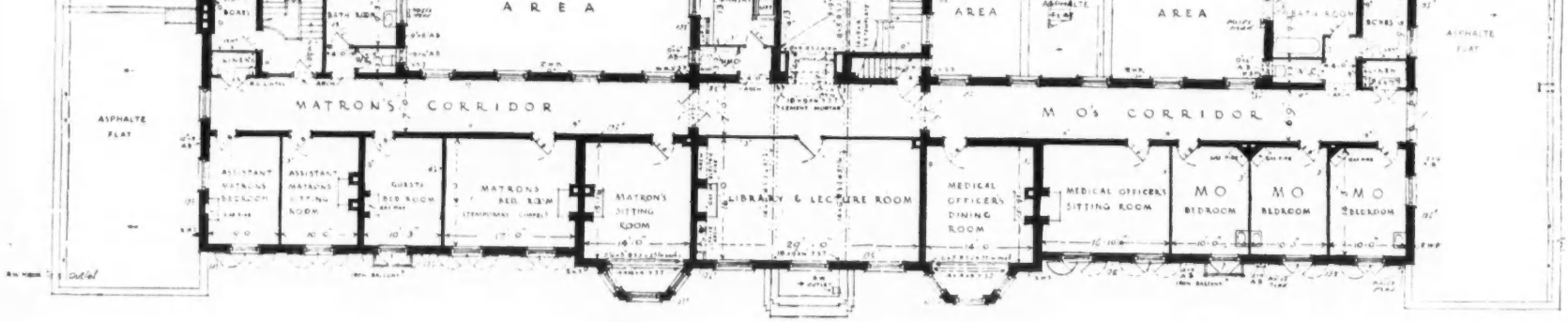


GROUND FLOOR PLAN. BLOCK Nº 2

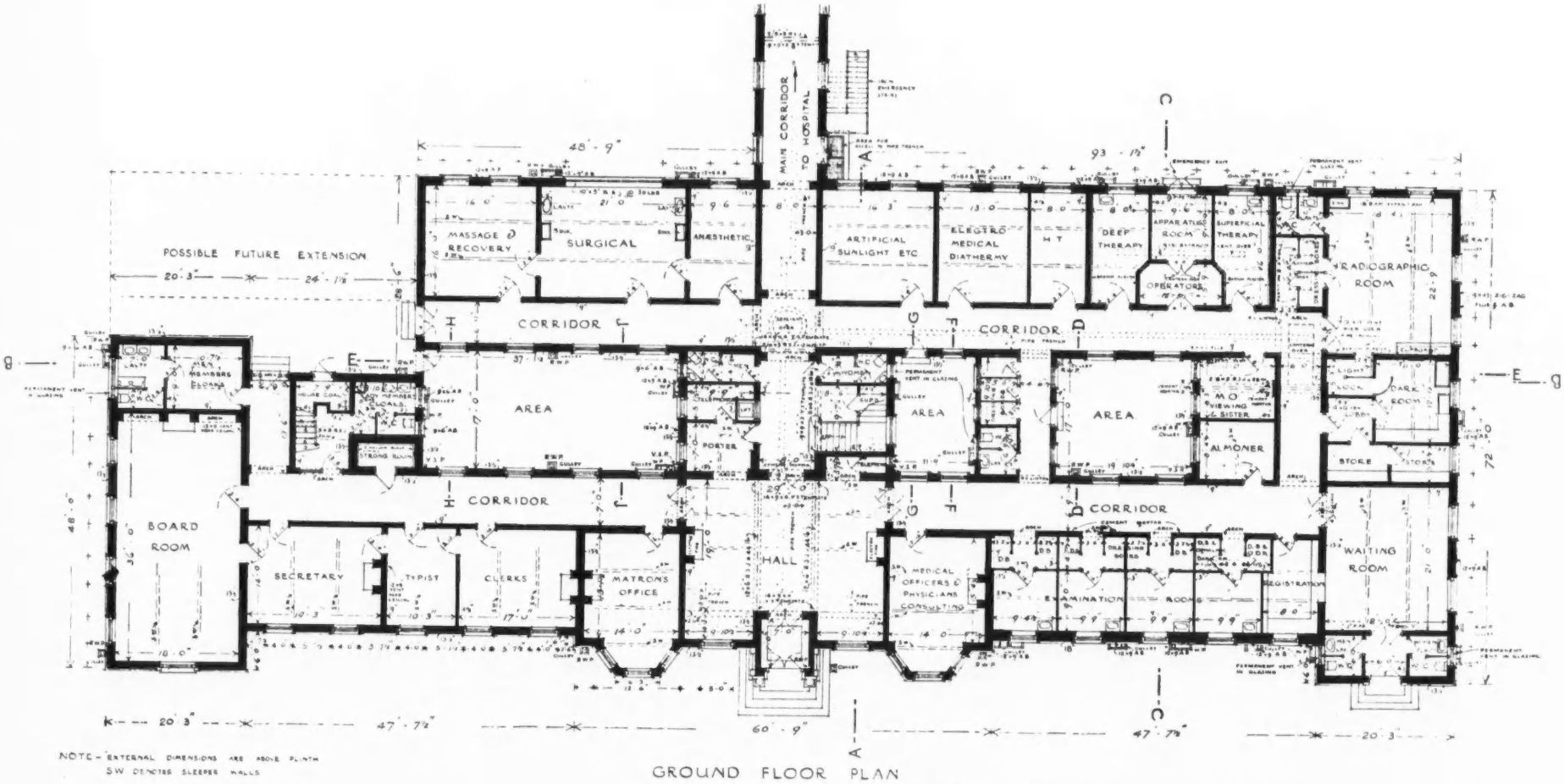
GROUND FLOOR PLAN. BLOCK Nº 3

ADMINISTRATION, OUT-PATIENTS', AND X-RAY DEPARTMENTS





FIRST FLOOR PLAN

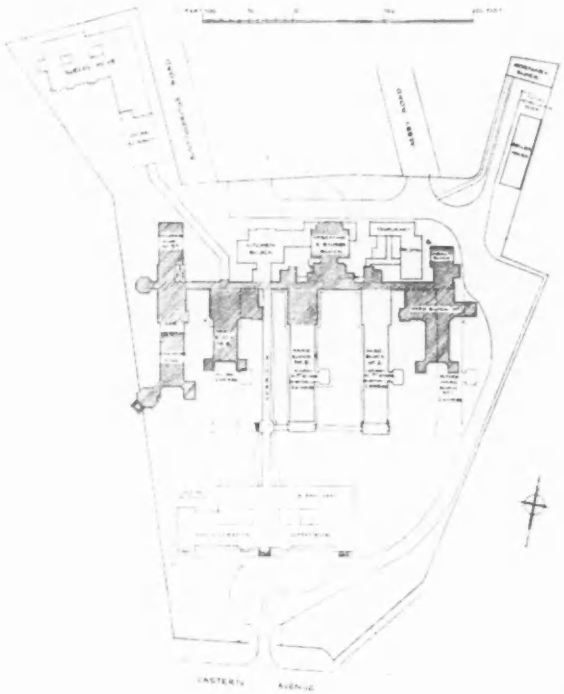


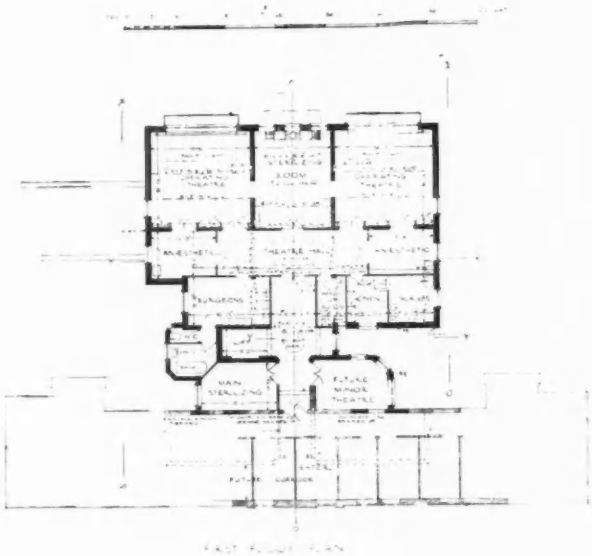
NOTE – EXTERNAL DIMENSIONS ARE ABOVE PLINTH
SW DENOTES SLEEPER WALLS

GROUND FLOOR PLAN

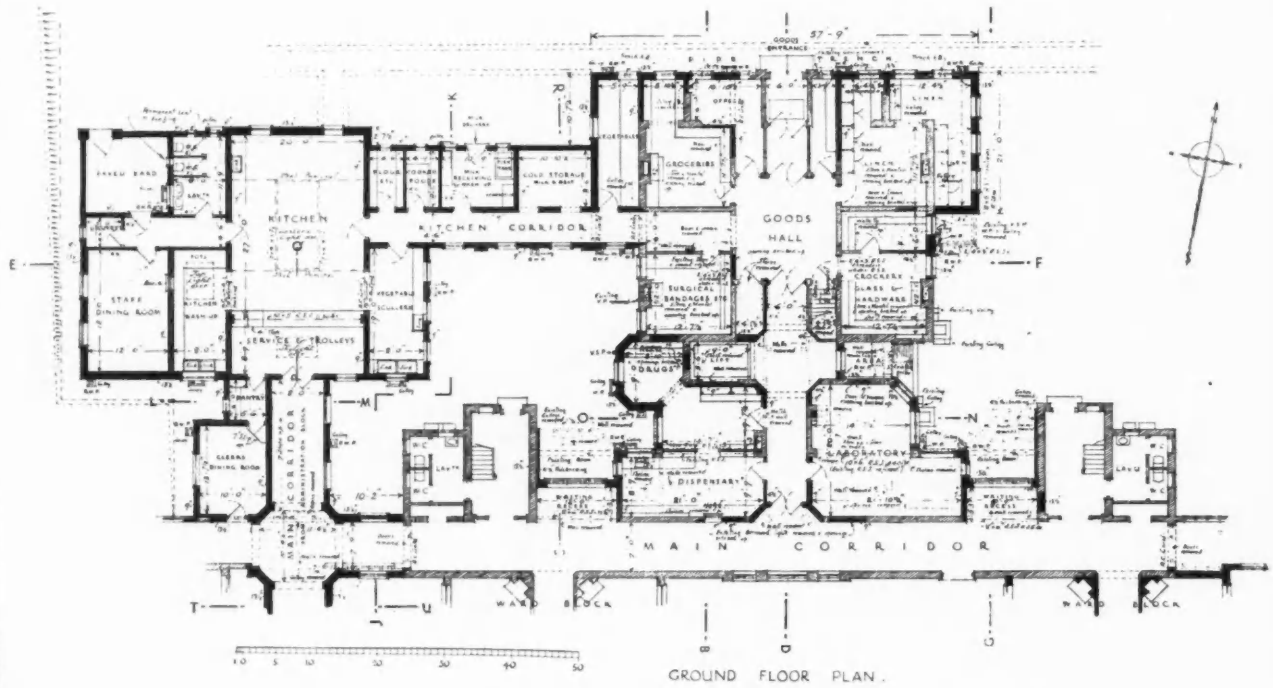
C. J. Dawson, Son & Allardyce, Architects. T. A. Pole, Consulting Architect.

SITE PLAN





PLANS OF THE KITCHEN AND OPERATING BLOCK



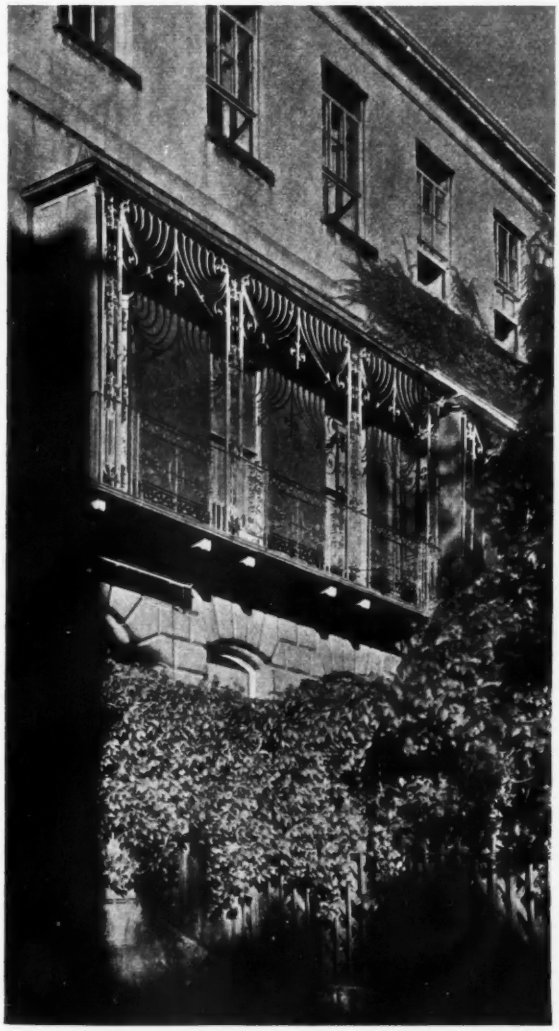
C. J. Dawson, Son & Allardyce, Architects. T. A. Pole, Consulting Architect.

SELECTED PRECEDENTS:

FOUR FAÇADES IN THE ENGLISH TRADITION

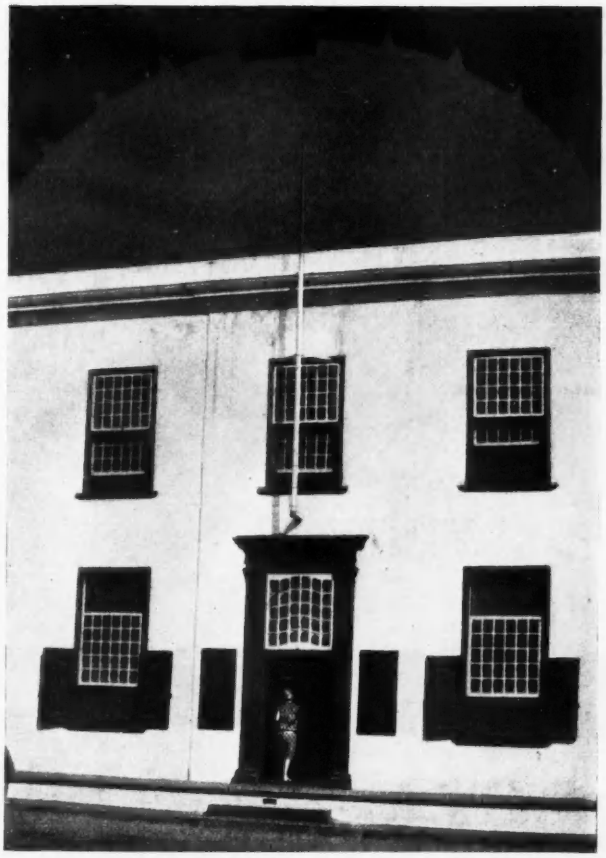
THE house at Cheltenham (figure 1), dating from the early nineteenth century, is in the best tradition of English urban architecture. We here find that the flat façade is a perfect background for the ornate balcony. It is noteworthy that the balcony was first introduced into this country some two hundred years before the period of the house here illustrated, but it was not until the popularization of cast iron that this feature lent itself to the decorative treatment at which our Georgian forefathers were so adept.

The County Hall at Lewes (figure 3) has refined and scholarly detail in the Classic convention. One cannot fail to admire the skill with which the architect has assembled the



1. *HOUSE IN PRIORY PARADE, CHELTENHAM.*

various motifs of his repertory of ornament. The Tuscan columns are in perfect scale with the balustrade above, and are in admirable contrast with the rusticated wallage on either side; while the

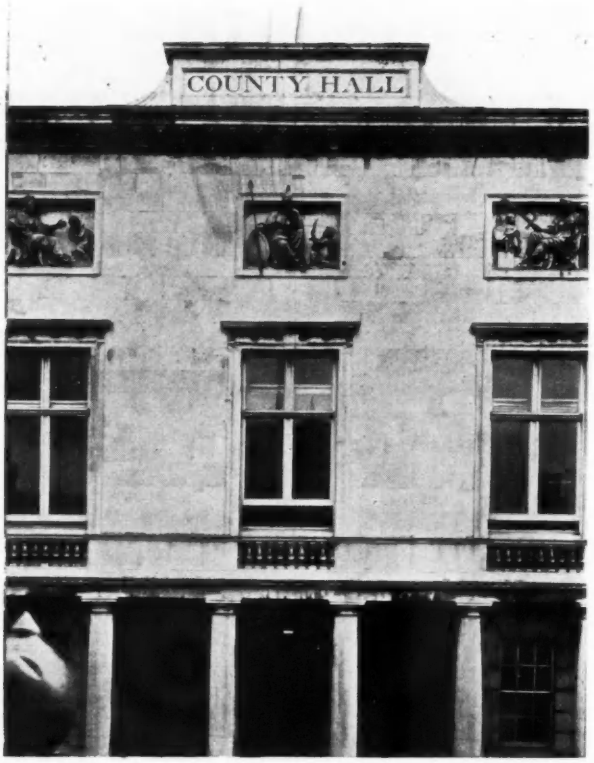


2. *HOUSE IN KEEROM STREET, CAPE TOWN.*

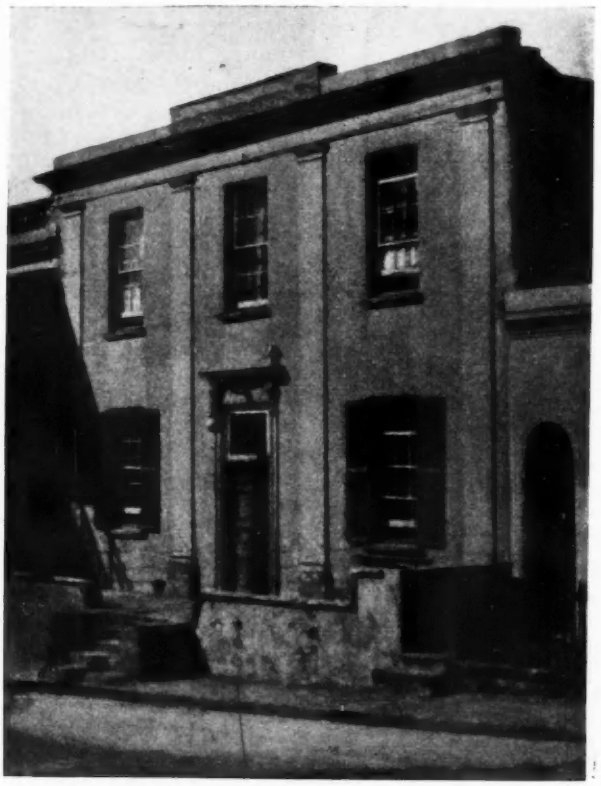
windows, with their delicate architraves and bracketed hoods surmounting medallions, to accord with the sculptured panels. Here, too, we find that the requisite repose is attained by setting these features against the plain wall surface of ashlar, which is well punctuated at its upper terminal by the modillion cornice.

It is remarkable to what extent the vernacular Classic convention established in England during the eighteenth century influenced architectural developments in our colonies. The design of a house in Cape Town (figure 2) has a close affinity with those Georgian houses which were distinguished by rectangularity of outline and an orderly pattern of fenestration. The panes of the windows, however, are smaller and the sash-bars thicker than in contemporary examples in this country.

The second example of the South African style (figure 4) has the type of elegance often associated with our own Regency work. It will be observed that the architect did not consider himself under an obligation to take his Order from the copy-books, but had sufficient self-confidence to devise his own proportions for column and entablature. Yet his experiment seems entirely successful, for the tall and slender pilasters which project so little from the wall surface seem quite adequate to support the entablature which surmounts them. The raised blocking course at the centre of the façade in an economical and unaffected manner gives an added formal emphasis to the entrance doorway. A. T. E.

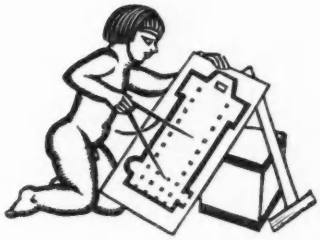


3. *THE COUNTY HALL, LEWES, SUSSEX.*



4. *HOUSE IN HOPE STREET, CAPE TOWN.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, SEPTEMBER 16, 1931

SHIPS AND BUILDINGS

THE Shipping Exhibition, which opened at Olympia last week, is certain to attract a large number of architects, who will visit it with the intent to find stimulating parallels between the design of ships and that of buildings. In recent years it has been customary to pursue these parallels a little too persistently, as if it were possible and even desirable to give to structures on land some of the formal characteristics which have hitherto been associated with vessels floating on the sea.

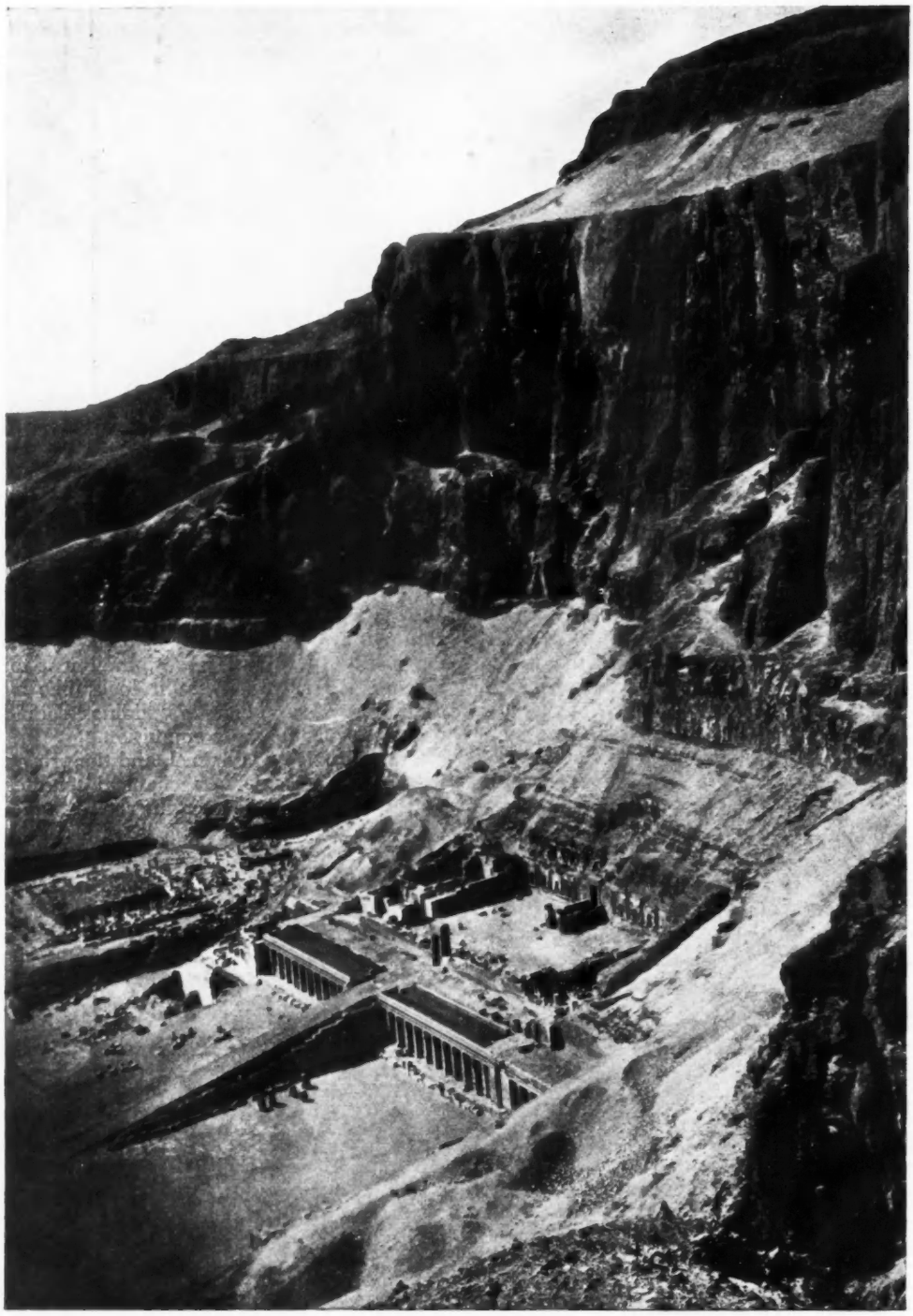
If we succeed in making our buildings look too much like ships, we do an injustice to ships, and deprive them of their artistic birthright, for it should surely be the privilege of ships to have marked characteristics of their own, and we become their enemies rather than their friends if we steal their clothes to give a fictitious interest to the structure of our buildings. For a ship is a thing that moves, and a well-designed one expresses this capacity of movement by its very form. But a building which is of necessity stationary should look stationary, and should therefore express a character indicating stability and repose.

In the case of ships, this impression of possible movement is usually obtained by the marked asymmetricality of the side elevations of the vessel, where we find that the bow is very different from the stern, and all the features of the superstructure are inflected in one direction. A ship so designed that its funnels and masts made an absolutely symmetrical pattern would appear capable of moving either backwards or forwards indiscriminately, and such a degree of insensitiveness would not be pleasant to behold.

Where the two arts have points of resemblance is in the grammar of design, which is fundamentally the same for each. But while the artist, whether he designs a ship or a building, should strive with the same zeal to establish æsthetic relationship between the parts of the structure, there is no excuse to translate into architecture from ship design features which, by the nature of their subject, belong exclusively to the latter art. In the conning tower of a man-of-war we find long continuous windows of small vertical dimension, which are designed to enable the occupants of the tower to obtain an uninterrupted vision of the sea in all directions, and this continuous window at eye level appears as a rather narrow horizontal slit. The justification for this form is also due to the necessity for protecting the conning tower with as much armament as possible, and hence the smallness of the window area. But to transfer such narrow horizontal slits of windows to buildings of an ordinary type is extremely illogical. One pays a poor compliment to a building when one says of it that it looks like a battleship. Yet ships, just as much as buildings, should exemplify organic principles of composition.

The lines of the hull, keel, and the prow are, indeed, largely determined by mechanical considerations, but the superstructure of a big liner, for instance, is largely determined by the desire of the ship's architect to give it a neat and attractive appearance. Visitors to Olympia will doubtless have reason to acclaim the skill with which in many of the ship designs there displayed the artists concerned have deliberately arranged the masts, funnels, bridges, and cabin decks to form simple and elegant patterns. Our modern architectural Puritans, who profess to believe that the beauty of ships is entirely due to their compliance with the dictates of utility, are doing a grave injustice to those who have succeeded in advancing the art of ship design to the high standard it now so often attains. Nor need we subscribe to another doctrine of these latter-day critics—that all ships are beautiful. Some ships are beautiful, and others are the reverse, as every sailor knows. Architects will find an added enjoyment in their visit to Olympia if they exercise their critical faculty freely and distinguish between the various degrees of excellence shown in the exhibits.

Architecture and ship design stand or fall together. In the eighteenth century, for instance, when architecture attained to a great and noble style, our ships also were supremely beautiful. In the mid-Victorian period even ships tended to become ugly. But today, when we like to imagine that architecture is on the upward grade, ships, in sympathy with buildings, are acquiring a new elegance. It may be hoped that the present exhibition at Olympia will convince us of this, besides declaring to us the remarkable proficiency of our marine engineers, of which, indeed, there was never any question.



A MORTUARY TEMPLE ON THE EDGE OF THE LIBYAN DESERT

The Mortuary Temple of Hatshepsut at Der el Bahari is different in plan and conception from all others in Egypt. It is built in three tiers or terraces, with a central ramp sloping upwards to a sanctuary cut in the limestone cliff at the back of the sacred edifice. It was never finished, but it has not suffered greatly at the hands of time. On its northern side is a colonnade of sixteen-sided columns, and a small chapel dedicated to the jackal-headed deity, Anubis. The natural setting of this monument of Egypt's famous queen is one of the most beautiful that can be imagined. The architect who designed it, by name Senenmut, was privileged to excavate his own tomb in the living rock face below its floor. [*From* The Art of Egypt through the Ages. *See page* 378 *of this issue.*]

NEWS & TOPICS

INJURIOUS ECONOMIES

I NOTICE signs that many of the municipalities who, at first, were somewhat panic-stricken by the urgent appeals to public economy are now regaining their sense of proportion in this matter and are beginning to distinguish between economies which are necessary and beneficial in the present national emergency, and those which, if insisted upon, would be definitely injurious to the community. For instance, the Oxford City Council has decided that expenditure on improvements at Oxford should not come under the economy axe, and it has sanctioned tenders amounting to nearly £13,000. At Finsbury, speaking at the opening of four blocks of flats, built as part of a slum clearance scheme, Councillor Charles R. Simpson, the Mayor of Finsbury, strongly deprecated the cessation of building projects which were being undertaken for the purpose of housing reform, and his attitude in this matter is typical of many other municipal councillors throughout the country.

*

Last week, preliminary to the meeting of the Trades Union Congress, there was a conference of the National Labour Housing Association on the subject of housing and slum clearance, and Mr. F. A. Broad, M.P., president of this association, urged that if this temporary economy stunt were to put an end to housing reconstruction at the present moment it would make the ultimate problem much more difficult and would involve the present waste of a tremendous amount of money. The result would be not only a great unsatisfied demand for houses but an increase in the unemployed building operatives by such numbers as would put a greater strain on the unemployment fund than it could stand. Fortunately, there is in the House of Commons a group of housing reformers, by no means confined to one party, who will make it their business to point out to the Chancellor of the Exchequer the inadvisability of ruthless cuts on national housing.

BALANCING THE BUDGET AT NOUGHT

Unfortunately, there is no industry which has so much to lose by an indiscriminate economy campaign as the building industry, and I am afraid that architects, too, must look forward to lean times ahead of them unless steps are taken to establish the fact that the cessation of all building work is not only a great hindrance to the development of industry and commerce but will itself aggravate the unemployment problem. As Mr. J. M. Keynes remarked in *The Evening Standard* last week, " exclusive concentration upon the idea of economy, national, municipal and personal, meaning by this the negative act of withholding expenditure which is now stimulating the forces of production into action, may, if, under the spur of a sense of supposed duty, it is carried far, produce social effects so shocking as to shake the whole system of our national life." And the eminent economist goes on to say that " if we carry ' economy ' of every kind to its logical conclusion, we shall find that we have balanced the Budget at nought on both sides with all of us flat on our backs starving to death from a refusal for reasons of economy to buy one another's services."

HOOVER'S CURE FOR DEPRESSION

In America, they are proposing to tackle their own difficulties in quite a different spirit, for President Hoover, in a recent address at Indianapolis, proposed a gigantic scheme of commercial and industrial expansion. During the next twenty years he would have his countrymen build " 4,000,000 new and better homes, thousands of new and still more beautiful city buildings, and thousands of factories." He urges them to provide new parks, schools, colleges and churches as a cure for the present state of " depression." The Federal Government of U.S.A. is engaged upon the greatest programme of waterway, harbour, flood control, public building and airway improvement in all its history. The construction works already authorized and the continuation of policies of Government aid will require a total expenditure of upwards of half a billion dollars annually. This combination of energy and optimism should surely be an example to us and act as a national tonic.

REGISTRATION AND THE LONE ARCHITECT

Now that Architectural Registration is at last an accomplished fact, there comes an announcement from the Home Office that the Secretary of State is required to appoint five persons who are in practice as architects to represent the interest of those who do not belong to the various architects' associations. Out of the five persons who are appointed, three will be selected to serve on a preparatory committee for the purpose of summoning the first meeting of the Council and determining certain matters in connection therewith. The first meeting of the Council will not be held until the beginning of next year, when the Act comes fully into force. Persons appointed to the Council will hold office for a year. This preparatory committee will enter on its duty as soon as practicable on appointment, and its work will finish with the first meeting of the Council.

*

Any architect not represented by one of the associations of architects is at liberty to propose a person to be appointed as above, and should send his proposal in writing to the Under-Secretary of State at the Home Office, giving full particulars of the architectural work of the person proposed, the name of any profession or name of any institute to which he belongs, and the names and qualifications of those who support his candidature. As the opponents of the Registration Act attach such very great importance to this clause, which makes it obligatory that a certain number of architects not belonging to the professional organizations should have a hand in determining the first constitution of the Architects' Registration Council, especial interest attaches to the names of the persons so chosen. It has never been claimed that all the architectural talent that there exists in this country is to be found within the ranks of professional organizations. Yet it remains to be seen that these special representatives will possess the type of personality and general qualification which alone would seem to make their appointment worth while.

LONDON GOES TUDOR

There are two rumours going about, and both, alas! I have on unimpeachable authority. Poor London is to suffer new indignities from the horrors of " pseudo-Tudor " architecture. It is said, by this unimpeachable authority, that all the houses erected at next year's Ideal Home Exhibition will be made to form part of a Tudor Village. This Exhibition is fortunately a transitory affair, but what effect and influence does it have ? How many of the lay folk who visit it will go away with the horrible idea that

those Tudor cottages are "picturesque," "cosy," even "thoroughly English"? The Ideal Home Exhibition is surely intended to show the ideals of the present, new and better materials, new and better ideas. And all it is going to do for us this next year is to recommend that we should house our cars, aeroplanes, wireless sets, all our modern lives, in sham sixteenth-century shells. Or do the controllers of the Exhibition wish us to revert to sixteenth-century lives too? It is unfortunately impossible to think that of the many thousands who will visit the Exhibition none will be influenced.

*

The other rumour, equally unimpeachable, is worse in the sense that when it becomes a fact it will be a permanent horror in London. Shepherds' Market is to be pulled down and replaced by blocks of flats, which will also resolve themselves into a Tudor Village. Shepherds' Market has a charm of its own, although it has no very remarkable buildings, and there will be many who will regret its disappearance. If it had to be pulled down to make way for good modern development we should not be justified in complaining very much. But who can adequately claim that this sham Tudor stuff has anything to do with progress in the twentieth century? A Tudor Village in the West End, only a few yards from Piccadilly! The only words that meet the case are quite unprintable. Is there no hope of stopping these things?

ANCIENT MONUMENTS

We have reason to be glad that no axe of economy has deprived us of the quiet but steady labours of that section of the Office of Works which is engaged upon the preservation of ancient monuments. A report of progress recently issued includes ten castles, six abbeys and one cathedral church, only a few from the longer list of works, both great and small, which this zealous department are carefully preserving for posterity and us.

*

Its method of working has caused much trepidation among those whose notions of antiquity are still decked with ivy, for the preliminary in the case of most ruins is to strip the fabric of parasitic growth, so that it may be carefully examined before it is repaired, and, if necessary, reset with plants and grass of less harmful nature. In many cases the draining or clearing of ancient moats has discovered either the old springs or the conduit that brought river or sea water to fill them, so that a restoration of function, exceedingly valuable to a proper understanding of their true nature, has taken place.

*

To a nation so plentifully enriched, as we are, with reminders of our past, it is a fine education to have the best of these monuments in such a state as will make their story readable. Too often such things crumble away unheeded while a race grows up in ignorance of what it sprang from, denuded of those roots in their soil which in subtle ways feed character and stamina. Quite another aspect of the work will be the recommendation to foreign visitors to see what we ourselves so patently value. It is possible that extended publicity of the work which the Office of Works is doing will have its just reward.

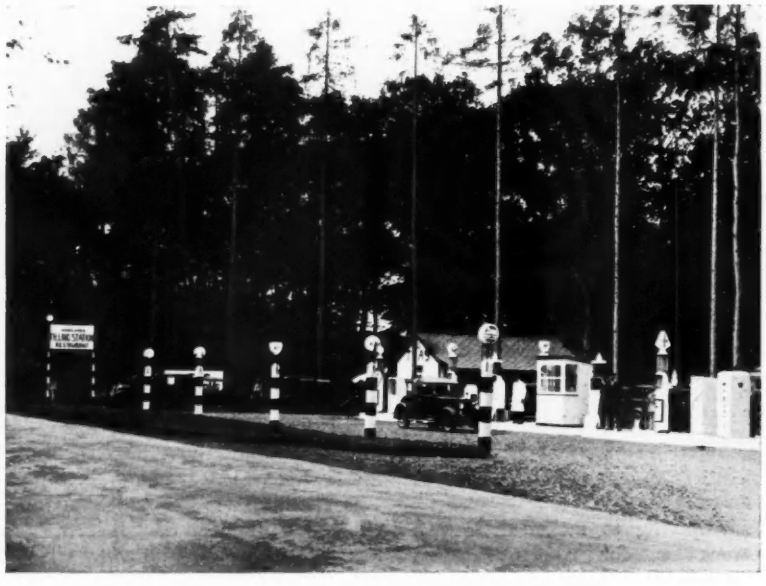
"TO BE, OR WHAT TO BE" (WITH APOLOGIES)

On October 1 the National Trust and the Society for the Protection of Ancient Buildings are holding a meeting at Whitehall, Shrewsbury, for the purpose of arousing interest in that house. Whitehall was built in 1582, and is a fine example of the rather unusual square Elizabethan house with three gables to each side. The two societies have been interested in its fate for some years, and now a decision must be reached. Its recent owner, who was an antique dealer, has had for financial reasons to vacate it. Not very long ago the interior was fitted out with bathrooms and modern sanitation, and it was used as an hotel. The house is therefore in good condition, and does not need large sums of money spending on it to make it fit for modern usage.

*

When there was a Bill before Parliament for making Shrewsbury a bishopric the house seemed admirably suited for the Bishop's Palace. But the Bill was unfortunately turned down. And now the house is empty, and something must be done about it. There are one or two unofficial schemes in the air, but all schemes for a house of this kind need money, and its future seems very precarious.

ASTRAGAL



"Woodlands" Filling Station, which won the first prize of £10 for the neatest filling station in the New Forest Area. The design shows simple and unpretentious buildings made of cheap materials and painted white.

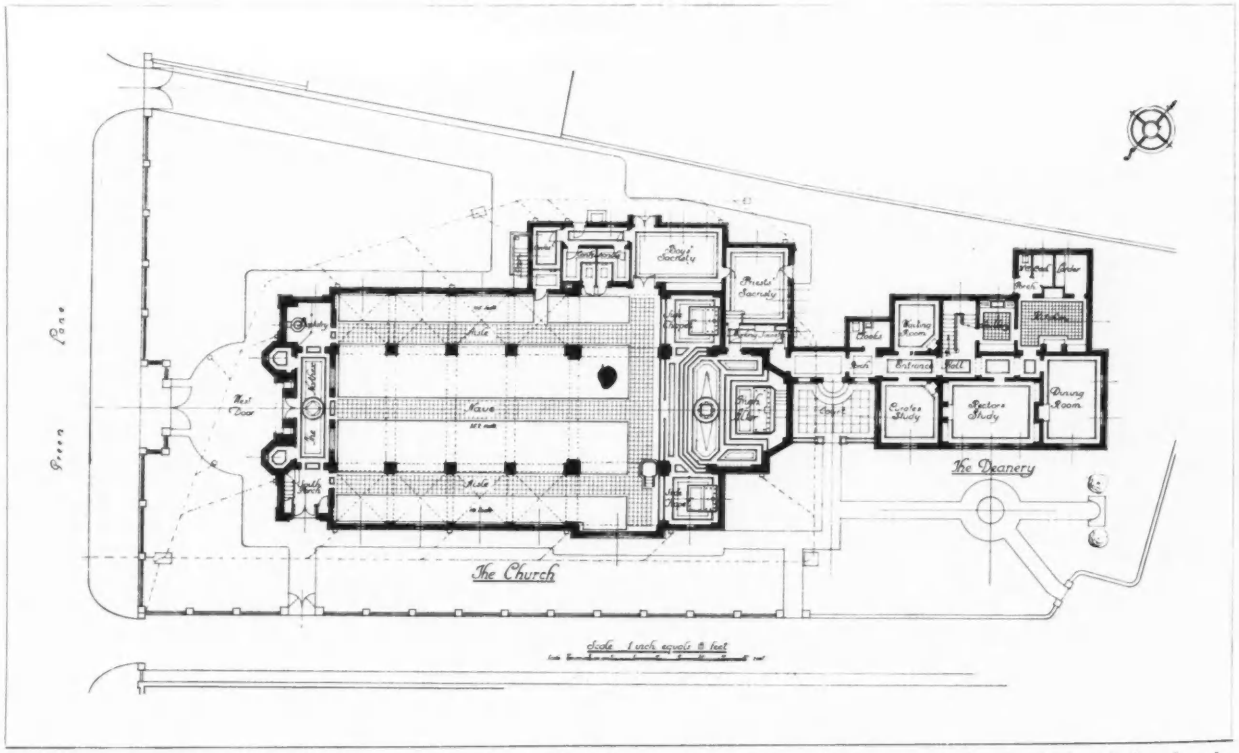
ST. CECILIA'S CHURCH, LIVERPOOL

DESIGNED BY E. BOWER NORRIS (SANDY AND NORRIS)

The main front, as seen from Green Lane. The walls are of highly-coloured rustic bricks, pointed with silver sand and cement. The roof is covered with tiles. A photograph of the entrance doorway is reproduced on the following page.

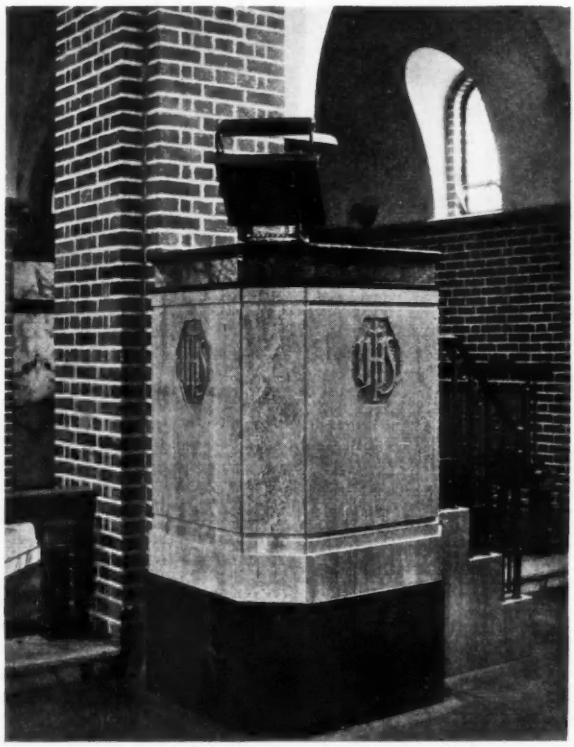
THE general design of St. Cecilia's Church, Liverpool, here illustrated, was conceived on sturdy lines, owing to the fact that the building is situated in the centre of villas of the usual suburban type.

The central feature of the exterior is the deep recess over the main entrance doorway, which has a triple light window, lighting the main body of the church. Internally, the effect is one of impressive proportions, the main focal point being the High Altar. The design generally, while being of modern tendency, is at the same time devotional and colourful. The church was opened by His Grace Dr. Downey, Archbishop of Liverpool, in December of last year.

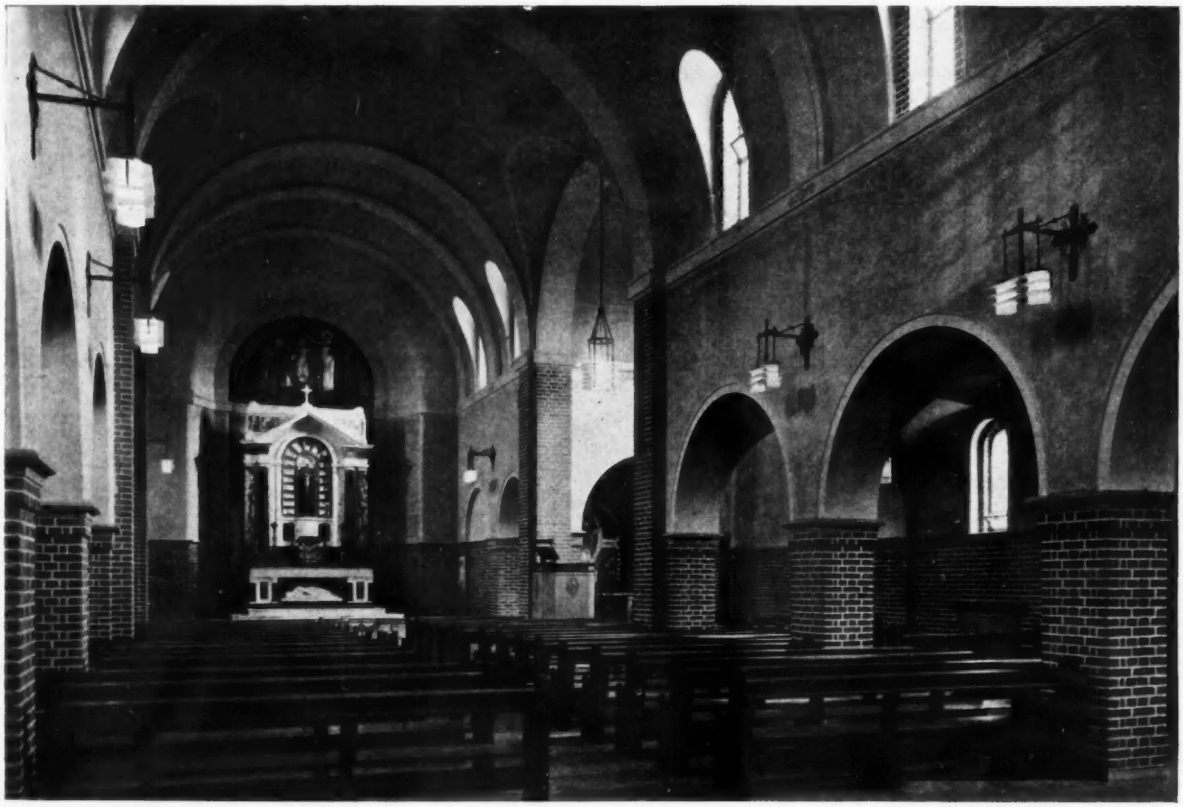


The ground-floor plan. Seating accommodation is provided for 575 persons, comprising 352 seats in the body of the church, and 105 and 118 on the north and south sides, respectively.

The main or west entrance is surmounted by the figure of St. Cecilia, the Patron Saint of Sacred Music. The three windows above light the nave of the church.

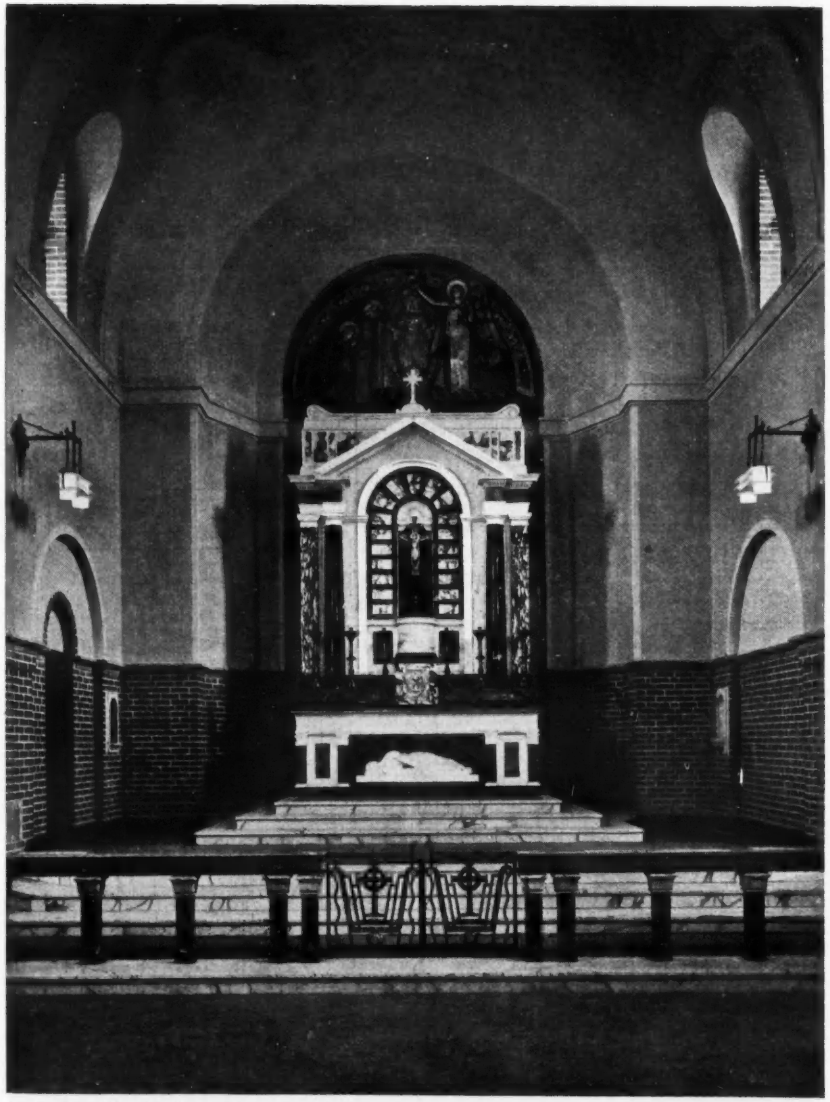


The pulpit is in polished Roman stone, and has a base of Tinos green marble. The window shown lights the side chapel, dedicated to the Sacred Heart.



St. Cecilia's Church, Liverpool.] [*By E. Bower Norris (Sandy and Norris).*

Looking down the nave towards the High Altar. On the right is seen the pulpit, a near view of which is reproduced at the top of this page. The arches are in brick to a height of about 8 ft., and are plastered above.

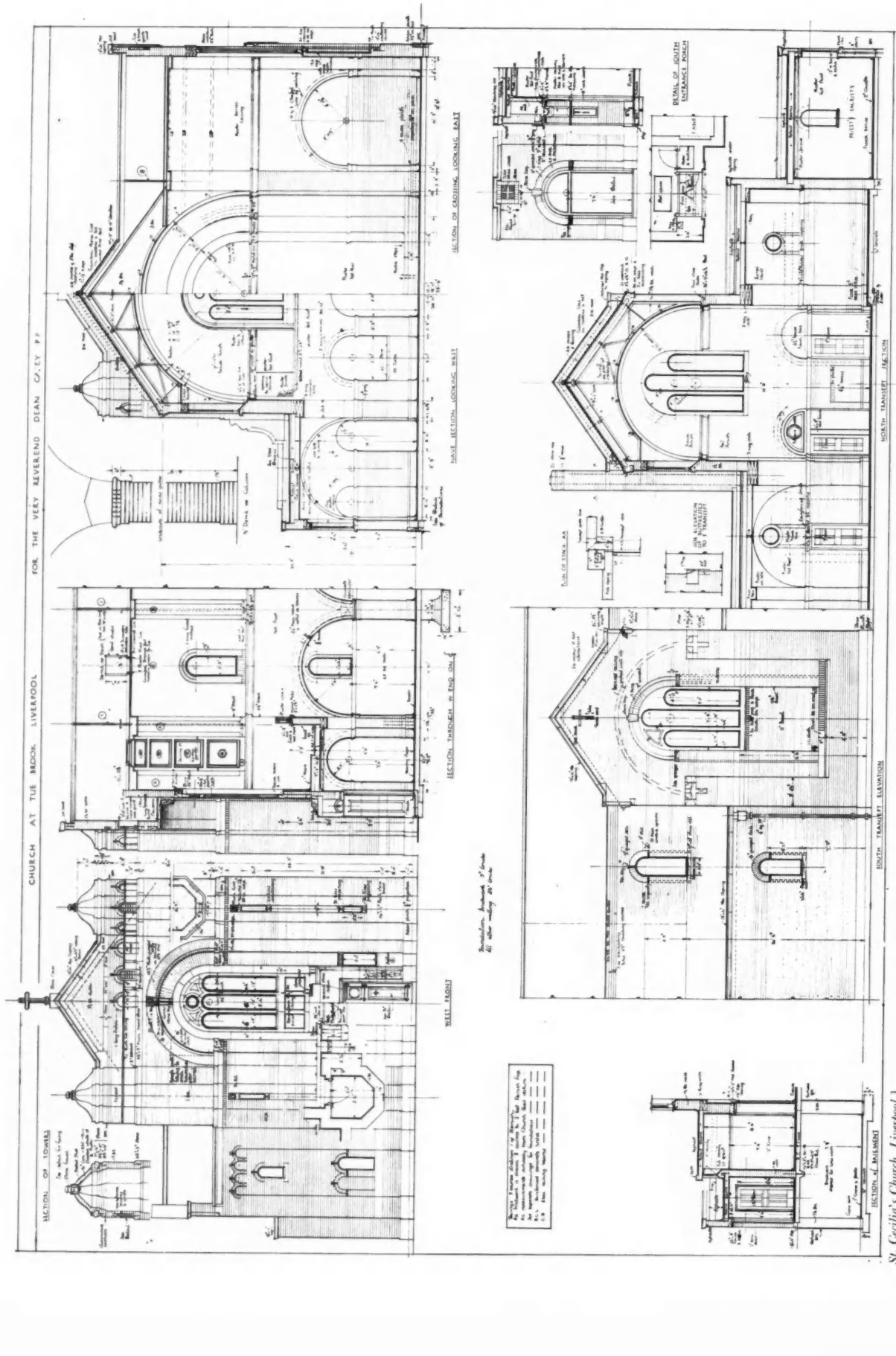


St. Cecilia's Church, Liverpool.]

The tympanum of the arch over the marble High Altar is decorated with a highly-coloured gesso panel, depicting the Annunciation. The door on the left leads to the sacristies.

[*By E. Bower Norris (Sandy and Norris).*

The vistas at the ends of the north and south aisles are terminated by two side chapels; that at the end of the former—dedicated to Our Lady—is shown above.

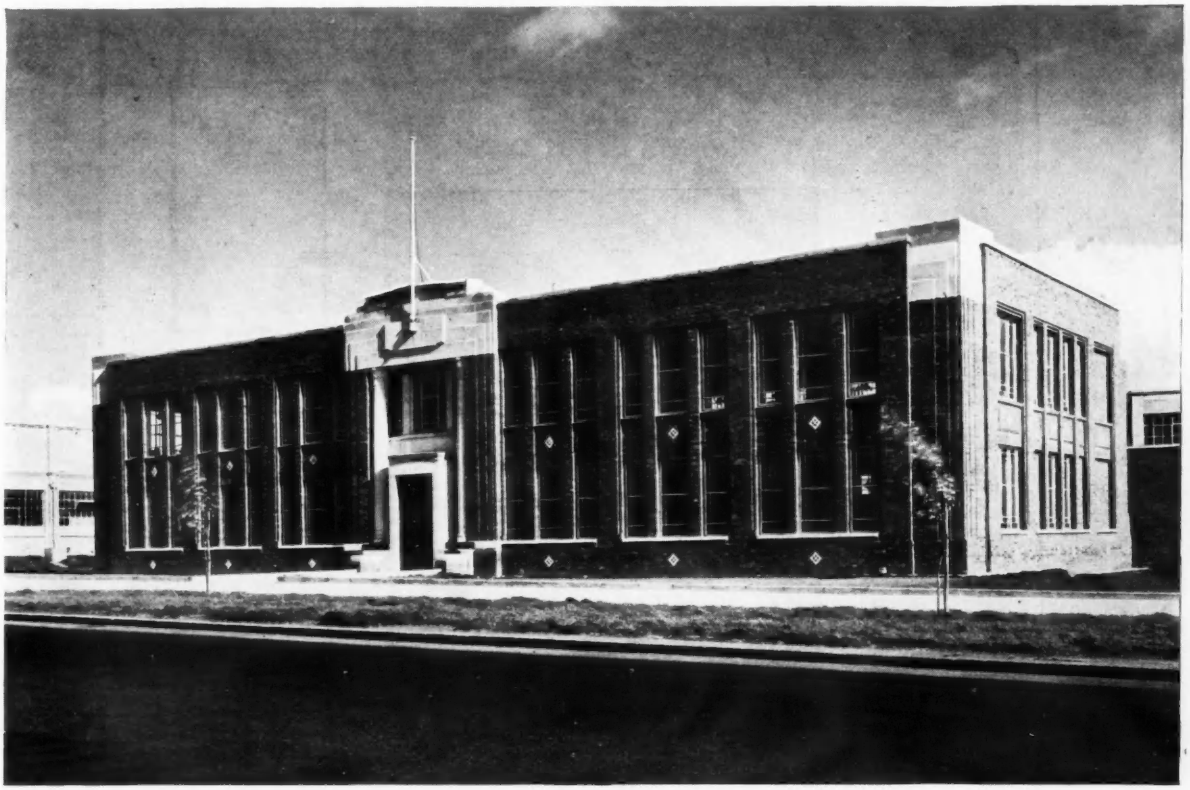


St. Cecilia's Church, Liverpool.

[*By E. Bower Norris* (*Sandy and Norris*).

The architect's drawings of the elevations of the west front and the south transept; sections through the north transept, the west and eastern ends of the Church; and of the basement.

THE SPERRY GYROSCOPE FACTORY, BRENTFORD



The main front, facing the Great West Road, houses, on the ground floor, the administration offices, and on the first floor the drafting and experimental rooms. At the rear are bicycle and car parks, and the workshops, glimpses of which are shown.

ON THE GREAT WEST ROAD, MIDDLESEX

H. COURTENAY CONSTANTINE AND F. W. MOORE
Associated Architects

PREVIOUSLY the Sperry Gyroscope Company, Ltd., occupied offices in Victoria Street, Westminster, and works at Shepherds Bush.

The new building on the Great West Road provides, on one site, for the administration and manufacture of the whole of the work specialized in by the firm, which is primarily the production of gyroscopic compasses, gyro stabilizers, searchlights, and apparatus of a similar nature.

The administration building (see plan on the following page) is separated from the factory by triangular paved yard spaces, enclosed by screen walls and used as bicycle and car parks. It is a two-story building, providing general offices on the ground floor, and drafting and experimental rooms on the first floor, and is connected with the factory at the rear by a corridor. The factory is divided into sections for the various processes in connection with the company's work, and includes workshops, factory offices, stores and impregnating and painting, polishing and plating shops. On the left of the site is the works entrance, and on the right the roadway to the loading dock.

The whole of the factory building is provided with north light roof construction, giving the maximum amount of daylight, and natural ventilation is obtained through opening lights in the glazing.

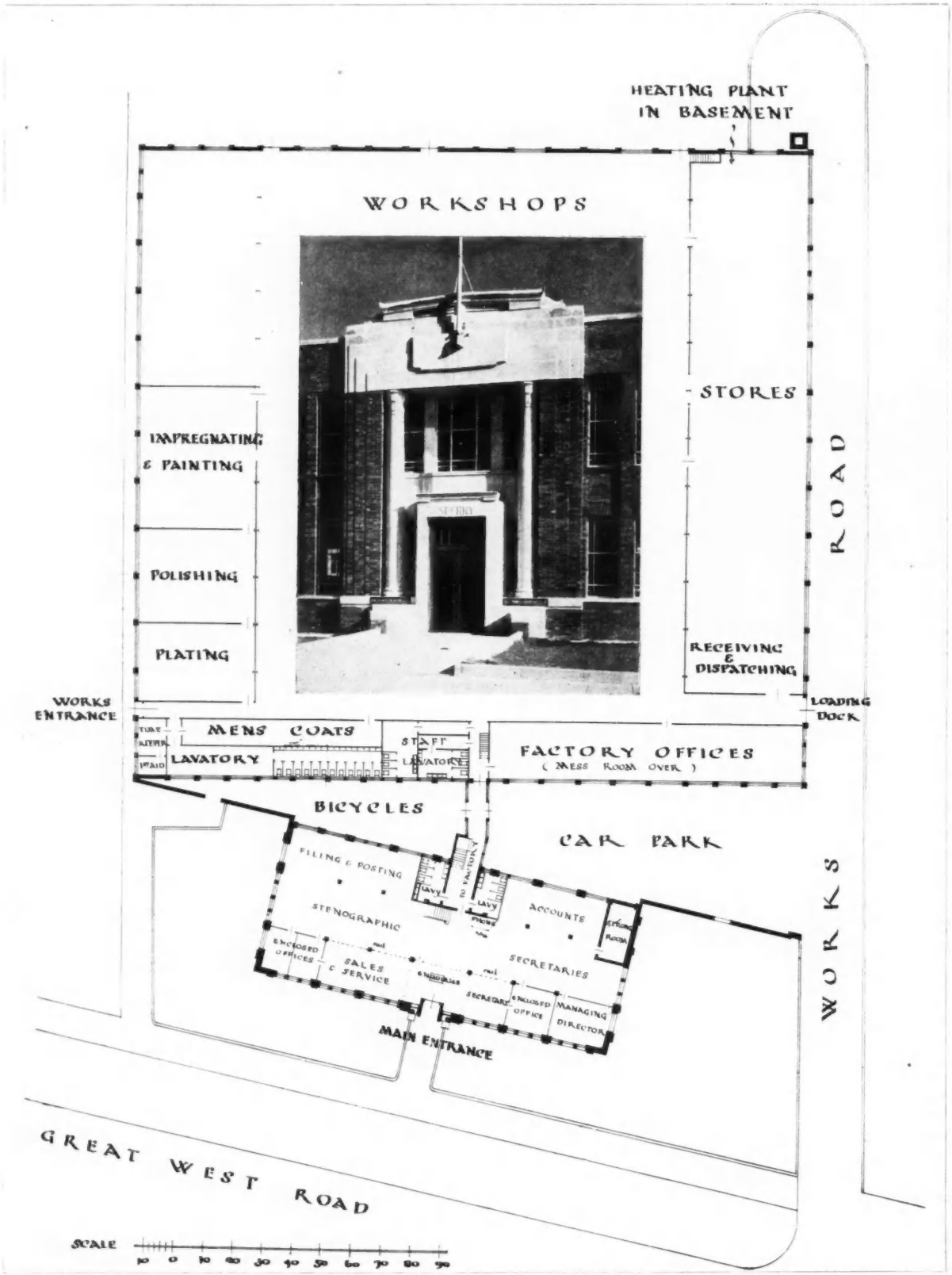
There are a large flat roof for testing searchlight equipment, and a mess room for the factory hands. The heating throughout is by accelerated hot water, the factory being primarily heated by ray-rads accommodated in the south slopes of the main roof.

The offices and factory have been designed to give the maximum amount of clear uninterrupted floor space, and internal partitions have been dispensed with wherever practicable. Accommodation is provided for 300 workers in the factory building, and all the sanitary equipment is of the very latest design, and in several instances especially designed for its purpose. Provision has been made in the design of the buildings for future extensions.

The exterior is faced with white Suffolk bricks with Portland stone dressings. The roof is covered with asbestos tiles.

The factory is one of the latest to be built on the Great West Road. The site has a frontage of some 260 ft., the main front of the administration building being about 130 ft. long and roughly 50 ft. deep. Behind are the factory offices and workshops, housed in a building 230 ft. long by 220 ft. wide. Of this, the floor space occupied by the workshop, impregnating and painting and polishing and plating shops measures 190 ft. long by 180 ft. wide.

During the last few years there has been a strong tendency for manufacturers to remove their factories beyond the Greater London area, sites on the new arterial roads being generally favoured. This reflex has had its influence on the Great West Road, where, perhaps, are to be seen as many factories of good design as on any arterial road from London.



Sperry's Gyroscope Factory, Brentford.] [*H. Courtney Constantine and F. W. Moore, Associated Architects.*

A photograph of the principal entrance from the Great West Road; and the plan at entrance level. The building has been specially designed for use in the manufacture of gyroscopic compasses, searchlights and similar apparatus.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xvii

PRIVATE PRACTICE AT LAST

BY KARSHISH

(H. B. CRESWELL)

MY condition at the time I was miraculously floated off on the wide seas of private practice was as follows :

I was twenty-nine years old, and had still to pass the final examination for Associateship of the Royal Institute. I had been pupil and assistant for six and a half years; had sketched and measured considerably in England; was a past student of and exhibitor—with perspective drawings—at the Royal Academy; had knocked about in various offices as assistant; joined my friend Garston on five unsuccessful competitions designs; spent a year as Clerk of Works under the Office of Works and three as Resident Architect to the Eureka Plough Company at Nollingborough—and that is all ! I was entirely dependent upon my earnings, and had no powerful friends or family connections to whom I could look for a shove off; my capital was represented by nine hundred pounds I had managed to save, and my claim on the public notice was my name painted on an obscure door-jamb in Charles Street, Adelphi, which no one passed except for the purpose of going to Adelphi Terrace. The fact that I launched myself from so high-and-dry and sand-docked a stranding was due to the conjunction of a circumstance with an event. The circumstance was the slackening of my ties with the Eureka Plough Company : the event was a church bazaar.

My engagement to the Company required me to give my whole time for three years. This did not prevent my working on competition designs and odds and ends of little jobs scavenged by Garston, nor from spending week-ends with him at his Charles Street office—with perhaps a day thrown in—slogging away gloriously at the vast gambles in Whatman's H.P. drawing paper that engrossed his energies. By the time these three years were drawing to a close, " our building programme," as Mr. Stevenson called it, was completed; no further buildings were immediately in view, and no extensive ones were contemplated. The offer Mr. Stevenson finally made me was that the Company should pay me three hundred pounds a year for organizing the maintenance of their Albion Works, attending board meetings when required, and directing and supervising alterations or additions carried out under Piggott (my works foreman), with the Company's own labour. I was to have a clerk at the Company's offices, to represent me there, and was otherwise to be free of my own time. If any work was carried out under contract I was to act as architect and be paid " additional fees commensurate with my services." As no rate of commission could have fairly met all possible cases, and the Directors had always treated me with liberality, I had no hesitation in accepting this offer; but my doing so involved my setting up in practice in Nollingborough if I was to set up at all without breaking my connection with the Company. I had never had any idea of practising in the provinces, and Nollingborough offered no sort of attractions to me; but with one leg in Charles Street the prospects were endurable, and the certainty of earning a livelihood in the first precarious years of the adventure exactly fitted my needs. It was just at the time that I had made this decision and was looking about for an office in the town that the famous bazaar was held.

It will be understood that during the three years I had been at Nollingborough I had made friends—as it is called—and formed a circle of social acquaintances. Of this I shall have to speak later, for I was to discover that in the provinces social pretensions are of more value to an architect than professional attainments; I have only to say here that, my father being by that time an honorary Canon of Peterborough, I came to know several of the clergy in the place, including its tremendous rector, the Venerable the Archdeacon (and arch snob) of Nollingborough, Mr. Ambrose Brythwater.

Thus it came about that when Mr. Brythwater organized a Grand Bazaar to pay for a bit of commercial church furnishing—an organ case, the price of which went largely to pay tout's wages and advertising expenses—which he had bought with no other means of paying for it than his ability to exact contributions from those who sought his social condescension, I was asked to lend a hand.

My early home training had by this time been replaced by the religious teachings of Garston, and I had little interest in church matters and none in a shoddy, machine-made, sham Gothic filagree which, in its subversion of the pure aspiration of humanity, in offering to the Almighty a thing that was no other than a mere adventure in money-getting, was, to me, nothing but a sin against the Holy Ghost; yet I agreed to help in the work of raising the £1,257 still needed to satisfy the manufacturers of the ugly thing, for not to have done so would have been as much as my social life was worth.

Before I was told in what way my services would be useful, the motives which daily made the Bazaar swell like a balloon under inflation was borne in upon me; and I, like everyone else, became concerned, not with how *I* could be of use to the Bazaar, but with how I could make the Bazaar of use to *me*. In this my hour of need, as so often happens, inspiration hit me like a bullet in the forehead when I saw one day, in the window of a fancy stationer's, picture-postcard views of Nollingborough coloured to represent the town in the flush of high fever. The only building in Nollingborough that was worth record was its thirteenth-century spired church, built, as was evident, by craftsmen from Northamptonshire. It occurred to me that if I made half a dozen water-colour drawings of this church, and presented them for sale at the Bazaar, I should satisfy the demands made upon me and, what was much more important, celebrate myself.

Garston's " puddle merchant," accordingly, got to work. The subject lent itself to pictorial treatment, for a fine ilex hung over the stone wall of the rectory which flanked the churchyard, and gave scale to the church; and its deep bronze-green foliage provided a delicious contrast to the cold, bluish-grey of the limestone which was exquisitely mottled with an orange lichen that also bedizened the tiled roofs. I made, in fact, not half a dozen, but fourteen such drawings, the size of a sheet of quarto paper—for I worked in loose, free washes. The whole thing was a huge lark, and gave me no trouble whatever, for I took snapshots; had three of them enlarged—but *not*, of course, in the town; traced them with black lead and a burnisher on to the paper, and turned off fourteen records of the wettest days Nollingborough had ever known, with varied sunsets and thunderclouds, and reflections so immaculately rendered that I found myself actually packing up one of the drawings upside down ! I finished two in the week and four at the week-ends; signed them with extreme legibility, and sent them to the appropriate stall-holder—a lady who,

socially, was labelled as "County." With the parcel, I sent a neatly lettered exhibition card :

Original Watercolour Drawings
of
St. Michael's,
by
BERNARD WHISTLOW.
One Guinea Each.

The effect I made was extraordinary. I was present at the Bazaar, where I helped to run a most unfair and most profitable Coconut Shy, which yielded us 2s. 7d. for every coconut won—in fact, the thing was so flagrantly dishonest that I felt overwhelmed with shame. Here, at the Bazaar, I was flattered by many compliments; but it was in the days following that I gathered unction to my soul. I found my social weight increased : those who had strained to assume equality with me—clerks at the works, for instance—surrendered their claim and retired crestfallen to wait on my condescension. Those who had previously condescended to me greeted me with complaisance; acquaintances took stock of me anew; friends set me in a higher esteem, and the shop-keepers, and even Piggott himself, adopted a more respectful bearing. The thing was subtle, but it was unmistakable, and it astonished me. It was as though my small accomplishment was an unheard-of marvel. More perplexing was a kind of resentment in some quarters, as though I had marked myself off by making claims that were unjustified. This I took to be a symptom merely of that jealousy and grudging envy that poisoned the whole place. I gathered, for instance, that it was resented I had valued my work so highly as a guinea a time. There seemed, however, some grounds for this view; for I learnt with annoyance that, late in the day, five of my drawings had been disposed of at 10s. 6d. each, and the last actually sold for five bob, proving that dog is not above eating dog at Church Bazaars. However, I was to find that I was more deeply involved in public opinion than I had any idea of. The thing I have to tell will appear incredible, but it was, nevertheless, characteristic of the absurd little place.

In those years J. McNeil Whistler was at the zenith of his notoriety, and was famous as a person to millions who knew nothing of his paintings. Will it be believed that the crowd of choice donkeys who got into the Bazaar at half price after six o'clock in the evening, muddled by a similarity in the names, incubated and hatched the idea that *I was the famous Whistler!* When this notion came afterwards to be discredited, there was an equally muddled idea that my drawings were not so good as they were supposed to be, and that I had been impersonating someone else and getting credit for the work of a better man. However, all this did me no harm, but only good; for everyone in the town came to know of me as an architect and as an individual.

It was in other fields, however, that I did best for myself out of this truly blessed Bazaar; for many among the socially eminent, who were patrons and attended the opening, bought my sketches; and some whom I knew—for I was in request at lawn-tennis parties—noticed my work. Mr. Stevenson's extraordinary and complete ignorance of art was a great asset to me at this juncture; for his admiration was enhanced by astonishment at having entertained so accomplished a being as myself unawares, and led him to regard my attainments as distinguishing himself. He had, with characteristic kindness of heart, bought one of my drawings, choosing one in which I had horribly overdone a sunset effect; and some time afterwards I overheard him in his drawing-room, where he had hung the framed sketch, calling the attention of a guest to it : "A—ahem!—er—a little thing by our resident architect, Mr. Bernard Whistlow—ahem!"

He asked me to make a "picture," as he called it, of his house and garden; but as he had a very clear idea in his mind of what he wanted, and was totally unable to convey that idea to me; and as it is doubtful whether the united forces of Messrs. Windsor and Newton and Mr. Reeves could produce the pigments adequate to his conception of his geranium beds, I had a heavy task and a not perfect success when all was done; but though I wished to make my good friend a present of the drawing, he would not allow it, but insisted on my accepting a cheque for ten guineas. This was twice as much as I should have asked at the time; but was only characteristic of his generosity at *all* times.

It was in this drawing that I first used my famous waterspout. The long streak of blue-black cloud, trailing down the side of the drawing, set off the staring brilliance of the dreadful house. Watercolours lend themselves entrancingly to such things, and it is a regret to me that I have never seen a waterspout in nature.

It was, then, from my adventure of the Bazaar that I was floated off in private practice—not with commissions in Nollingborough itself, but in the country round about; with a gradually extending connection among hunting people and the landed gentry of the neighbourhood, under circumstances which were, in many ways, wholly delightful—as I have presently to relate. Before, however, I close the history of the Resident Architect and open the new chapter I must tell of two experiences I had when employed by the Eureka Plough Company, both of which, although characteristic of the field in which I laboured, stand alone in my experience.

The first of these refers to circumstances, already referred to, in which I unwittingly invited and accepted a bribe. The kinds of buildings I put up called for large quantities of materials and of manufactured goods: and I soon grew weary of the delivery on the site of truck-loads of bricks, slates and whatnot that were not fairly up to sample or to specification, and of the awkwardness of sending away materials actually delivered, and condemning goods already manufactured. Thus I soon made it a rule to approve materials in bulk before delivery, and to overlook the work of manufacturers at their shops; and thus, I came to travel about the Midlands, and even sometimes to Glasgow, and once, as I remember, to Portmadoc.

I do not recollect where it was that I once found myself short of the money necessary to complete my tour of inspection; but I got into that predicament, and asked the Manager of works I was visiting if he could oblige me by cashing a cheque for ten pounds. Without saying a word, and with a curious perfunctory air, he at once took a quantity of sovereigns out of his waistcoat pocket and passed ten of them into my hand, as we stood. He then walked with me to the entrance and was on the point of saying good-bye when I reminded him I had to draw a cheque. I went to his office, where the transaction was completed by my making the cheque payable to self, and endorsing it.

Some months later I was counting my money—in those days an agreeable task, for I was earning much more than I spent; and, in ticking off the counterfoils in the stump of an old cheque book, was unable to find this ten pounds debited in my pass book. It took me a moment to realize that the cheque had never been cleared, and I can remember now the horror of that realization. I was conscious that the blood receded on to my heart before I flushed over my whole body. Not only had I been bribed, and accepted a bribe, but evidence of the fact existed in the uncashed cheque. Suppose that by any channels or intimacies of which I had no knowledge, Mr. Stevenson should get to know of this thing! It was nearly ten at night, but I had an impulse to walk over at once and see him, for I knew him to be at home. I am glad I did not do so, for I should have won more discredit for my simplicity than respect for an honesty of which he had good reason to be already satisfied. What I did was, then and there, to write privately to the Secretary of the firm, stating the facts, although I was unable to recall the name of the

official who had obliged me. The Secretary replied that the cheque had in some way been overlooked; that one of their Assistant Managers had lately left their employ, and that it had not been possible to trace any record of the transaction. Thereupon I drew a cheque in favour of the firm, which I insisted upon their accepting; and received in due course their receipt, together with a further protest from them and the statement that they were crediting the amount to their Superannuation Reserve, and that if at any time I found, as they expected, that I was in error, they would refund the amount.

The second gleaning from the ways of the business world I have to tell of, concerns the purchase of the land adjoining Albion Works upon which I built the new shops. The owner of the land was the proprietor of a small corset factory and lived in the town: but in negotiating the purchase I dealt entirely with his solicitor, a Mr. Pettigrew, who performed on the ground floor of a dismal old house, shrouded in gloom and dust and without any ventilation. Mr. Pettigrew kept his clients' papers stacked two feet high, and covered with a dust sheet of hideous age, on a large table at the side of his room; and when he wanted any document two desponding clerks answered his call, removed the dust sheet, and scratched in the heap until the required tit-bit came to the surface.

After the contract to buy and sell had been signed, and while the solicitors on each side were engaged in checking the abstract of title, Pettigrew's clerks one day scratched to such good purpose that they clawed into the light a forgotten deed which recorded that the Nollingborough Urban District Council had, many years before, paid fifty pounds to a previous owner of the land for the right to lay and maintain an 18-in. pipe sewer across it, on the understanding that after the expiration of ten years the owner of the land might require them to remove it if he desired to develop the land for building.

It may be supposed that the Urban Council of those days must have been hard up to find a run for their sewer; at any rate, there was now no easement over the land, and the sewer had been unknown to me and, apparently, forgotten by others.

I was present at the Board Meeting when the owner of the land attended to sign the conveyance. The documents were laid out on the table and the Company's seal was unlocked with the keys of the Secretary and of two Directors, by which its unauthorized use was triply safeguarded; and Mr. Reynard Borson was then introduced.

Mr. Borson had an air of resentful gloom, and it at once appeared that he also had a grievance. He told the Directors that he had sold the land under a misapprehension; that the Company were getting more than they had bought and he giving more than he had sold; and that he considered the Directors, as honourable men, should release him.

"But—ahem!—" said Mr. Stevenson, "we do not know to what you refer."

"Oh, yes, you do, sir," was the answer. "That sewer is worth a thousand pounds to me, and it's worth a lot more to you—as you must know perfectly well."

The Board's mystification was only increased by this.

"But the sewer is only an embarrassment to us. Will you please explain how it can be worth a thousand pounds to you?" Mr. Stevenson asked.

"Well," said Mr. Borson, "the Council would pay me a thousand pounds or more to let that sewer be."

"But," said Mr. Stevenson, "no question arises unless you intend to build."

"Well, and who'd know that I didn't want to? I can have plans made, can't I? And then they must either pay me compensation for refraining from building, or I can make a start and break the sewer. They'd pay me; but you are in a much stronger position, as you must know well. They might call the bluff on me, but you being here and extending all the time, they can make no stand at all. So far as I can see it would run them into three or four thousand, at least, to adapt the town sewers so that this one could be cut out; and there's no need to reconstruct the town's sewers for many a year yet."

Mr. Stevenson's protest that the Company had no intentions of extracting forfeiture from the town, and that I had planned their buildings so as not to interfere with the sewer, left Mr. Borson incredulous and unappeased. He executed the conveyance under protest and went away an injured man.

NEXT WEEK—XVIII: PROVINCIAL PRACTICE

The previous instalments appeared as follows:

May 27.	i:	I am Articled.
June 3.	ii:	Episodes of Pupilage.
June 10.	iii:	Episodes of Growth.
June 17.	iv:	My First Job: The Sewer.
June 24.	v:	My First Job: The "Pipes."
July 1.	vi:	I Turn Clerk of Works.
July 8.	vii:	Bradshaw & Son: Builders.
July 15.	viii:	Joe Richards: Foreman.
July 22.	ix:	Trials of a Clerk of Works.
July 29.	x:	A New Venture.
Aug. 5.	xi:	The Resident Architect.
Aug. 12	xii:	An Architect's Early Gruel.
Aug. 19.	xiii:	An Uphill Fight.
Aug. 26.	xiv:	A Disaster.
Sept. 2.	xv:	The Law's Majesty.
Sept. 9.	xvi:	A Failure and a Success.

QUESTIONS THAT ARISE

Flaking of Glazed Tiles

I. and S. write: "*About a year ago we covered the walls of a bathroom with 8 in. by 8 in. Dutch glazed tiles. A number have recently had the enamel come away from the backing. We should be extremely obliged if you could suggest the cause. We enclose herewith piece of the enamel and backing.*"

Generally speaking, the cause of flaking in glazed tiles is due to the fact that the tiles have not been raised to a sufficient temperature when being fired.

During firing the heat should be of such a degree that the biscuit and the glaze bind together, so that they will very nearly expand and contract similarly to varying temperatures. If, however, the tiles are submitted to an insufficient temperature, the glaze and the body remain as what may be described as two insecure bodies, and any sudden heat, such as steam in a bathroom, etc., will cause the glaze to fall away.

On examination of the portion of tile submitted, the biscuit appears to have the substance of a Spanish rather than a Dutch tile; furthermore, it is most unusual for 8 by 8 tiles to be manufactured in Holland, or for that matter in England either (except fireclay), as there is a tendency for the tiles to twist during firing. In Spain they do not appear to have the same trouble regarding tiles of the above size, this being probably due to the local conditions, etc.

It will, therefore, be found that in the majority of cases where 8 by 8 tiles are used, Spain is the country of origin.

W.

Running Rules

"Northend" writes: "*On page* 16 *of the* Standard Method of Measurements of Building Works, *the second paragraph of clause* 89 *(Asphalter) reads: 'All measurements shall be net and shall include for running rules.' I should be obliged if your expert would define the term 'running rules'.*"

I understand "All measurements shall be net and shall include for running rules" to mean that the work is to be measured as laid, and that no allowance can be claimed for any material left over and not used. By "running rules," I understand the temporary movable wooden fillets by which are gauged the various thicknesses of the work, and which are also used to define each particular section of the work.

S. U. R.

The garden front, as seen from across the lake, showing the charming surroundings in which the house has been placed, and the steps up to the garden.

HOUSE AT WEYBRIDGE, SURREY

DESIGNED BY IMRIE AND ANGELL

Looking along the main front toward the servants' quarters, housed in the projecting wing on the left of the photograph. The garage window is on the extreme right.

"CONEY WARREN" stands on high ground at St. George's Hill, Weybridge, Surrey, on a site sloping to the golf course. The walls externally are covered with plaster and weather-tiling; and the windows, gutters and rain-water pipes are of hardwood, to minimize painting.

The planning and internal finish of the house was influenced by a desire to reduce labour and upkeep. All wood is unpainted; the ground-floor rooms are finished in oak or elm and the bedrooms in basswood. The ground floors throughout and the dining-room ceiling are carried out in English elm.

There are only three fireplaces and one stack, the house generally being heated by radiators.

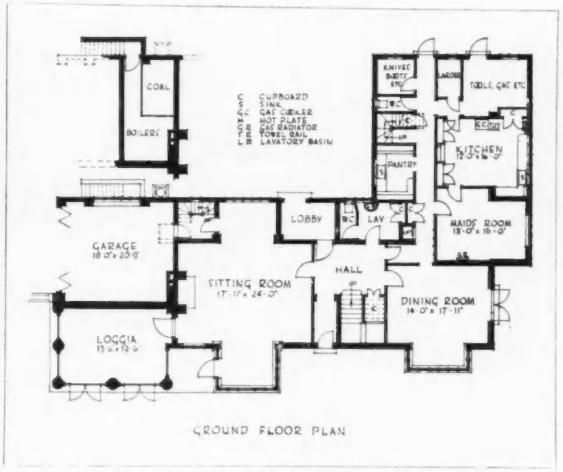
Cooking is by petrol gas.

The bay window to the dining-room and the gable addition to the dressing-room on the first floor are later work, and did not form part of the original design.

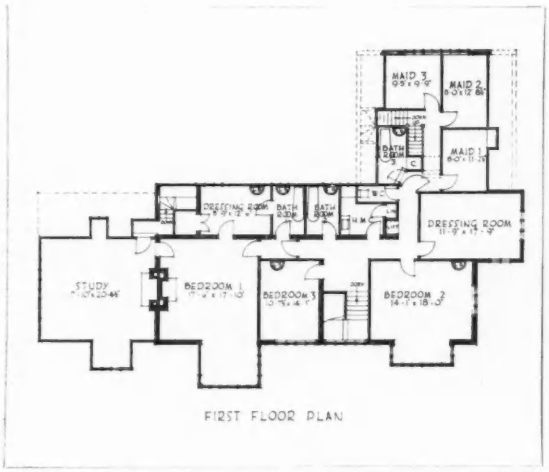
Another view of the garden front. The projecting bay on the right houses the dining-room; and that on the left the sitting-room.

The loggia is totally enclosed and heated. The windows above light the study.

The sitting-room, looking towards the loggia. The alcove on the left overlooks the garden. The fireplace is one of three installed ; the house is heated generally by radiators.



As will be noted from the ground plan above, there are five garden entrances. The house has many labour-saving fittings, of which a key is here given.



On the first floor the principal accommodation includes a study, three bedrooms (all overlooking the garden front), two dressing-rooms and two bathrooms.

The dining-room, looking towards the door leading to the entrance hall. The ground floor throughout the house and the dining-room ceiling are of English elm.

A view of the garden side. The walls externally are covered with plaster and weather-tiling; and the windows, gutters and rain water pipes are of hardwood. The gable seen in the above photograph is one of the later additions to the house.

LETTERS FROM READERS

Art and Industry

SIR,—Experience supplies the only test of the efficiency of exhibitions, but, judging by their frequency, they appear to be worth while.

For those who can visit them, they must be highly instructive, but the number of those who can get to them must be small in comparison with those who cannot. The latter class ought, nevertheless, to be reached in the endeavour to stimulate a desire for good design in common things. Still, if those who know advocate a great exhibition, by all means have one.

If I may venture to make a suggestion to all those concerned, from the committee downwards, it would be that in industrial design, especially in relation to objects of ordinary use, the result to be aimed at should be common sense made beautiful. J. A. GOTCH

SIR,—I think Mr. Noel Carrington's interesting proposal to give effect to the pious aspirations of Lord Gorell's committee would be most useful in "telling the world" that we can produce as good designs as foreigners, make it easy for designers, producers and the public to compare British with foreign design (and to learn all the lessons we can from such close comparison), to open up the market for better designs, and to help to educate the eye of producers and public.

There is one further way in which such an exhibition could help the harassed countryside. I refer to the ghastly standardized garages and bungalows. Perhaps the organizers could get a few manufacturers to exhibit some of good design, but no more expensive than those now on the market. County and other councils, as town planning authorities, are in considerable difficulty at present over granting or withholding Interim Development Orders for this type of building, especially when they know that the applicant is a person of small means. If designs such as I have indicated were on the market as well, local authorities would have no compunction in refusing to allow bad designs in similar cases. This would commence to free the face of the countryside from these pernicious pimples which show the unhealthy state into which the country has sunk in its outlook on beautiful things.

I don't envy the organizers in having to refuse a very large proportion of entries, ruthlessly yet tactfully, if such entries are anything like those which appear annually in the so-called Ideal Home Exhibition. Mr. Carrington would be a public benefactor if the only result of his suggestion were to improve the manners of *The Daily Mail's* turbulent offspring.

He also proposes that architects should be largely responsible for the designs. It is an excellent suggestion, but I should like to see this carried a step further to help achieve one of the aims of the D.I.A., namely, to get closer co-operation between manufacturer and artist, whether architect or otherwise. Plainly, the proposal would only do this to a limited extent. In the past, artists employed by firms do not seem to have been businesslike in the production of their designs, and it has been found difficult to fit them into a highly-organized concern. Some of those manufacturers who, up to now, have been doubtful about such co-operation might go, and be converted, but those who have always objected would have to be convinced in some other way that artists or architects are now reliable. Mr. Carrington's proposal seems to me to be trying to induce closer co-operation, but substituting architects for artists. If artists, however, will not be businesslike, and architects will, then there seems every reason to try co-operation along the lines of the proposal.

THOMAS A. EMMET

SIR,—I am entirely in accordance with the idea of Mr. Carrington's proposal to hold exhibitions of the common products of this mechanical era with a view to improving their design, but would suggest that small exhibitions should be held under the ægis of the Board of Trade, at which manufacturers and their designers, and that composite person, at best, half artist and half business man, "the architect," should meet to discuss technically the possibilities of improving the design of the innumerable articles in use in every household, club, restaurant, and tea-room throughout the Empire.

The outcome of such discussions on individual articles might result in a great exhibition, some years hence, of manufactured goods from Manchester, Stoke-on-Trent, Birmingham, and Sheffield, showing at least a commonsense development of the mass production of this period, and maybe a sound æsthetic development also of the inherent qualities of this method.

I think these exhibitions and discussions should be open to the public, to allow those who are at present interested to see and hear what is being done.

At the present time such a person as myself, visiting the ordinary store, finds so little giving a thrill of pleasure that he perforce goes to the Continent to find articles for the household that have some element of interest and beauty, at a low price. The money thus spent should not, in my opinion, leave this country.

As far as I have observed, there is scarcely a single article in everyday use by the great majority of people that is not capable of being improved in design and colour, without increasing the cost of production; indeed the cost of production might be reduced by the omission of extraneous ornament.

The day of mass production is undeniably here, and the circumstances of the time force most of us into continuous contact with things produced by that method.

It is therefore high time that those who realize it should take some definite action to obtain the best results from the machinery we have become heirs to, and direct this great power in such a way that the results would give pleasure to everybody.

Those who are indifferent would soon become accustomed to the changing form of things, and in a short time the higher standard would be absorbed and further initiative required to create something better.

The next generation would enjoy the improvement as the air it breathes, and would in fact be largely unconscious of it.

As a matter of historical interest, the ugly articles of today might be collected in a museum to show what we submitted to. W. H. COWLISHAW

The Pedestal Basin

SIR,—A few weeks ago you printed a letter of mine concerning a pedestal basin. I had thought the matter almost too slight to merit your readers' attention. Alas! I learn, as Anatole France learnt when he came to name his cat, that the business is not so simple. It is, in fact, so difficult that it may be termed altogether past solution. And from whom shall I seek justification, if not from the makers of basins? Yet the half of them say roundly that my builder was an ignoramus; while the other half say, with equal emphasis, that no sensible fellow would dream of introducing the pipes into the innards of the pedestal. And there are a few more who prefer to hum and haw. As one says so readily to the conundrumist at Christmas, I give it up.

Yet, Sir, a parting shot at my sanitary friends. Why, if this pedestal was never meant to house the pipes, had it a vent fashioned in its rear as if to admit them? (A rudimentary organ, maybe, of prehistoric significance.) Or why, at Olympian exhibitions, are the pipes so ashamed of their nakedness that they all take shelter in their pedestals? Or, why, if leaking pipes

must be anticipated, could not the pedestals be made of glass, frosted in front perhaps, so as still to permit of inspection? Any why . . . But enough, lest a parting shot become a barrage.

N. L. C.

Housing and National Economy

SIR,—There are two important considerations in connection with housing and State assistance, and these are the necessity to reduce the financial drain on the country, which has now assumed such large proportions, and the necessity to provide houses for the people. The discontinuance of the 1924 Act subsidy in respect of any houses not completed by a certain date would relieve the country from a cost which is growing at the rate of £1,000,000 a year.

The number of houses built by private enterprise without any subsidy from the State has increased in a very satisfactory degree, and if the competition of the local authorities is eliminated there will be a considerable revival in building houses for the workers.

The number of houses built by private enterprise without State assistance during the past three years has been as follows:

Year ended March 31, 1929, 64,740
" " " 1930, 91,691
" " " 1931, 138,728

During the same years local authorities have completed the following numbers: 1929—55,723 houses; 1930—60,245 houses; 1931—52,514 houses.

From these figures it is evident that private enterprise will very soon replace the shortage which a discontinuance of local authorities' building would create.

Such a course would leave the local authorities free to devote all their attention to slum clearance, in which direction the real housing question exists.

NORMAN MCKELLEN
(SECRETARY, NATIONAL FEDERATION OF HOUSE BUILDERS)

THE DEATH-WATCH BEETLE

Some Advice by A. R. Powys

FOLLOWING are some extracts from a monograph on *Timber Decay Due to the Death-Watch Beetle and the Furniture Beetle*, by A. R. Powys, issued by the Society for the Protection of Ancient Buildings, and published in the Royal Society of Arts Journal for September 11.

It is noticed that the timbers most affected by death-watch beetle are:

(*a*) Those bedded in or on walls (here there is liability to slight or excessive moisture). (*b*) Those where moisture is entering from leaking roofs or has in the past entered. (*c*) Those subjected to condensation water from roofs and walls; and (*d*) particularlysap wood, which, it is thought, most easily absorbs moisture from the air, and which is more suitable for the growth of fungi which are thought to be propitious to its life. (*e*) Timbers cut from trees past their prime, particularly those where the very centre of the tree has already begun to "lose its nature" before being felled. Such timbers are commonly more "shakey" than others—the shakes in converted timber provide a ready entry for the baby grub. The presence of fungus is suspected in such timber. (*f*) It is present also in timbers that have not these qualities or defects, but which are structurally in close connection with them. (*g*) At the joints between timber and timber, i.e., at the mortice and tenon. At these joints there is, perhaps, more moisture present than elsewhere, owing to capillary attraction, and at these points there is certainly a more ready entry for the baby grub than there is elsewhere. (*h*) It is noticed that mediæval rafters cut from the heartwood of oak trees, but not from their cores, are often immune from the beetle in roofs where it is elsewhere present; that is, unless these timbers have been subject to constant wet.

It is stated by Professor Munro, and it was stated by Professor Lefroy, that the presence of the exit holes of the beetle is not proof of present activity. It is said that present activity can only be verified by finding the beetle in the timbers, by finding the grub in the timbers, or by the evidence of the beetle dust discharged from the holes while yet the timber is unmoved and unshaken.

It is said that it is sometimes possible to find whether the beetle is active or not by pasting on the face of beetle-holed timber a piece of paper. New exit holes will, thereafter, easily be apparent in the paper if the beetles emerge.

It is certain, if there is no immediate danger, and in positions where this is practicable, that the continued activity of the beetle can be tested by marking the existing holes on chosen areas of timber and observing, after a year or two, whether the number of holes increases.

It is probable that the researches being made by scientists will before long be rewarded by the discovery of a way to check this scourge; and it is likely that this way will be either by taking steps to prevent the occurrence of fungi, which may be necessary to the life of the beetle, or by attacking it at some vulnerable period of its life, as for instance, immediately after hatching, when the newly-emerged grub crawls for a while over the surface of the timber. It is, for instance, suggested that at this stage the insect then lives on certain moulds commonly present on the surface of oak.

Until some discovery of this sort is made, the repairers of old oak structures can rely on structural methods of repair, and can hope, by the use of insecticides, to kill the insect and check its increase. The proper ventilation of timber in a building under cover is certainly desirable. But the prevalence of the beetle in timber in the open is proof that ventilation alone will not end the pest. Yet ventilation in the open and in buildings is not comparable. Fungi and moisture are the two factors required for its life, and, under the cover of a roof, ventilation is a deterrent to both those.

The present method of checking the activity of the beetle grub, apart from structural repair, is by means of insecticides applied to the timbers.

It is certain that progress of decay caused by the death-watch beetle is very slow. The following general advice is given to architects and others when they have to report on the stability of roofs affected by this form of rot:

Where the framework in question is structurally sound, and if the strength remaining in the timbers is for the most part sufficient for its purpose, there is no need to condemn a structure on account of the presence of the beetle.

In these circumstances, and because of the present limited knowledge of the life history of the insect, it is advisable to check the activity of the beetle by using an insecticide.

Sapwood should always be removed from new and old oak in the course of framing a new structure or repairing an old one, with the one rare exception, namely, the existence of moulded or carved sapwood that yet retains the shape given it by old carvers. There the wood should be sterilized and hardened and left.

Adequate ventilation, access for cleaning, and, if possible, for daylight, should be provided.

It is not thought that varnish or a similar surface covering will hinder the young grub gaining access, because it seems unlikely that the grub would attempt an entrance from the smooth surface, where it could obtain no purchase to start its tunnels. It is probable that it starts its active life by entering the timber from an open shake or an open structural joint, and in both cases the cracks would be wider than a coat of varnish could close. Varnish and like surface treatment is to be avoided, for æsthetic and other reasons, where old oak in ancient buildings is concerned. The closing of open shakes and other like crevices with wood-stopping preparations of the right colour and consistency is desirable.

SWIMMING BATHS AT HELSINGFORS

DESIGNED BY
VÄINÖ VÄHÄKALLIO

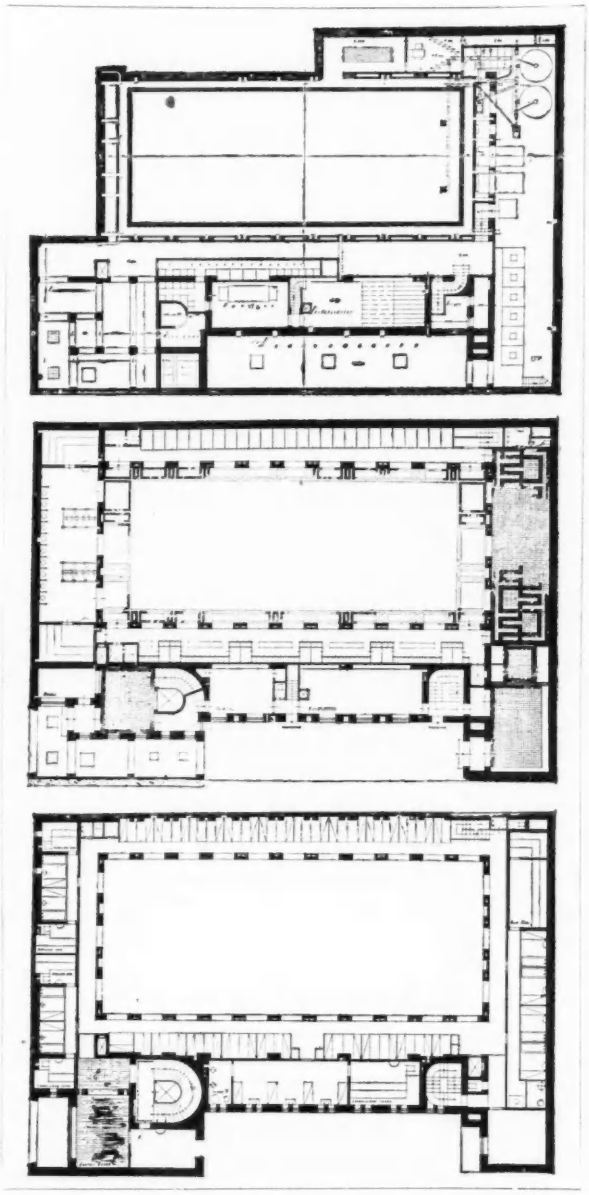
The entrance bay of the main front. The building has been erected in a central position of the town to increase its serviceability.

VARIOUS sites were under consideration for the new Helsingfors swimming baths, including several on the outskirts of the town. It was decided, however, that the usefulness of the building would be very much increased if it were put up in a central position so that city workers with only a little time to spare could make use of it at every possible opportunity.

It was, consequently, necessary to carry the building up to the full height permissible under the building law, and to include under the one roof a great deal of accommodation besides the swimming bath; some of it being capable of producing useful revenue.

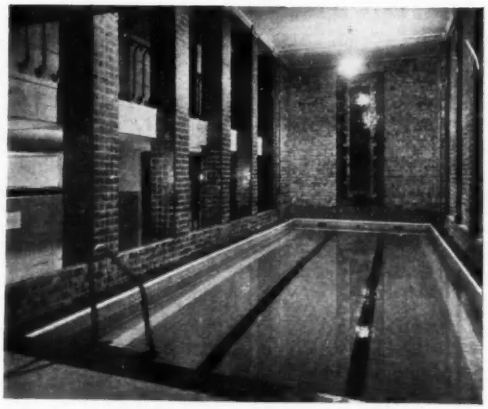
Among these other features are a covered tennis court, bowling alleys, rooms for boxing, fencing, massage and electrical treatment. The building also contains a restaurant, and hairdressing rooms for both sexes. There is a valeting service, which enables visitors to have their clothes pressed while in undress. The laundry, which washes the bath linen, also takes in outside washing.

In addition to the slipper, Turkish and other special bathing arrangements, the building contains two swimming pools, one for either sex. As a thorough

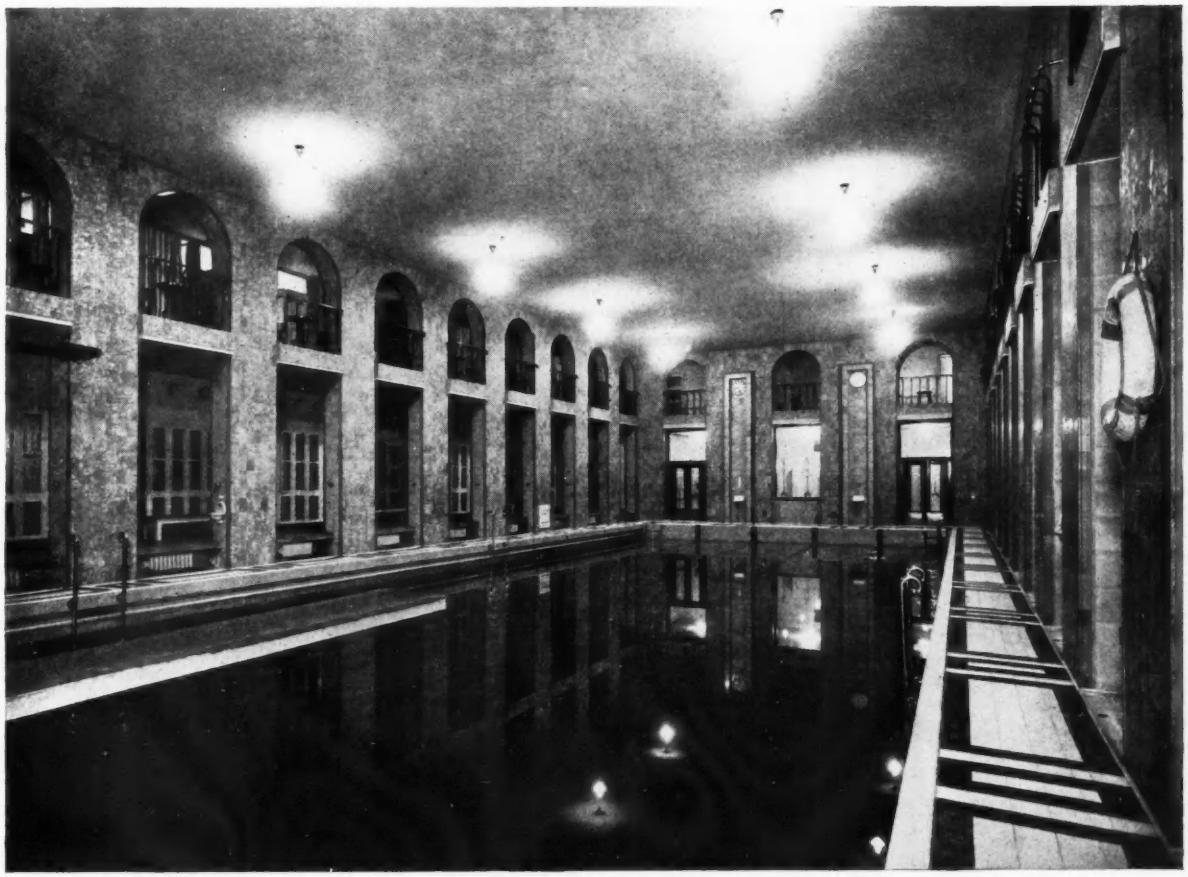


Basement, ground- and first-floor plans, reproduced to a scale of 1 : 500. The men's bath extends through two floors; the women's is above it.

A view of a shower-bath room. The use of costumes is forbidden. But visitors can have their clothes pressed in the valeting department; and may even send their linen to the laundry under the same roof.



The ladies' swimming-bath, showing the pool and spectators' gallery. This is on the second floor immediately over the men's bath.



A general view of the men's swimming-bath looking towards the shallow end. The depth at the deep end is 3½ metres, and the highest diving-board is at a height of 5 metres above the surface of the water.

washing is insisted upon before visitors are allowed to enter the swimming pool, the use of costumes is forbidden.

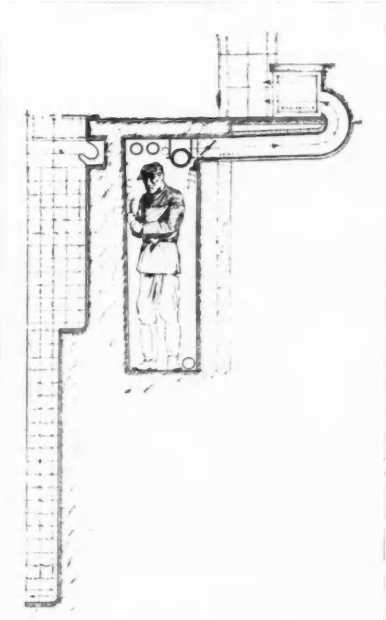
The men's pool, the larger of the two, is situated on the ground floor and is housed in a hall two stories deep.

The ladies' pool is on the second floor, immediately above the other. The dimensions of the pools are based on the swimming distances current in championship events, namely, 100, 200 metres, etc.; the length, consequently, is 25 metres and the width 10 metres, which allows five competitors to start side by side, each having 2 metres clear width.

The water depth at the deep end is 3½ metres, while the highest diving-board is 5 metres above the surface of the water.

The heating installation is on the low-pressure steam system. There are six coke-burning boilers. In addition to heating the building, the steam is utilized to heat the bath water, the drying closets in the laundry, and a special apparatus for melting snow on the roof during the winter months.

With the outside temperature taken as 22° F., the heating installation is capable of heating the main departments to 75° F., the tepidarium to 140° F., the calidarium to 158° F., the laundry to 50° F., and the lesser rooms and passages to 64° F.



Vertical section through edge of pool, showing inspection trough and ducts for ventilation, heating, etc.

The ventilation is partly central and partly direct. The central system is worked by means of an air-warming and conditioning plant placed in the basement, by which the air is heated to a temperature of 77° F.

The swimming halls also contain a number of radiators with fresh-air inlets adjacent. The outer temperature being between 50° F. and 14° F., it is calculated that the air is changed completely once an hour in the principal rooms, twice an hour in the laundry and in the ladies' swimming hall (which is of comparatively small cubic capacity) three times an hour in the slipper baths, shower baths, etc., and in the kitchens, and five times an hour in the lavatories.

As will be seen from the small sectional drawing reproduced herewith, the pool is surrounded by a hand-hold, a foot-step, and a trough, deep enough for a man to stand in, which serves for inspection and for conveyance of various pipes.

LITERATURE

THE ART OF EGYPT THROUGH THE AGES

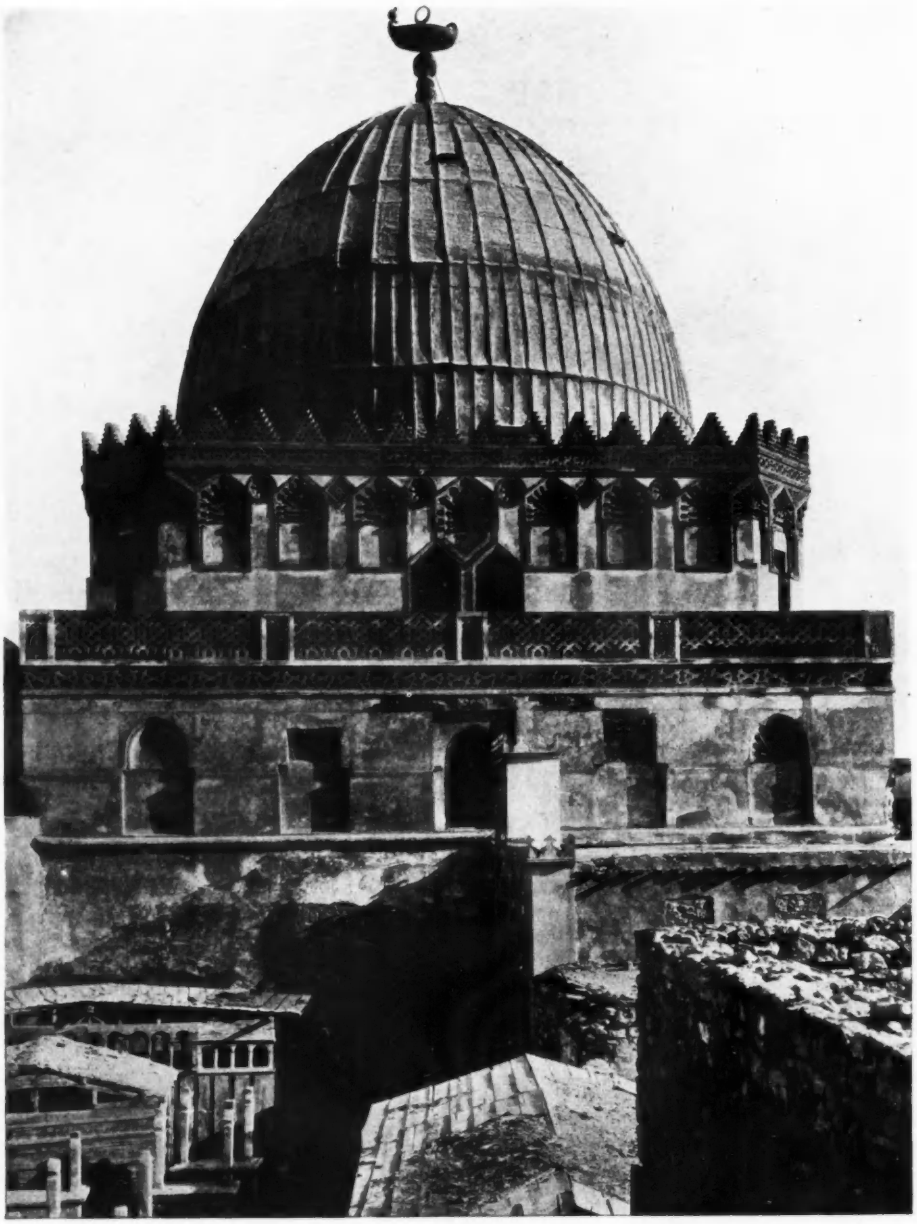
THIS important work, edited by Sir E. Denison Ross, signally fulfils its object of presenting in a convenient form an illustrated survey of Egypt's art from prehistoric to Mohammedan times.

Its 300 photographic plates—many of which are superb examples of reproduction—are prefaced by eighty pages of descriptive text. These comprise nine articles, which have been contributed by some of the foremost authorities of the present day.

The book covers a period of six thousand years of history, and includes an account of the four great civilizations that have flourished on the Nile—the Pharaonic, the Alexandrine, the Christian and the Muslim.

In his introduction, Sir Denison Ross pays a deserved tribute to the work of such archæologists as Sir Flinders Petrie, who have rolled back the pages of history and revealed to us a definite knowledge of Egypt's culture from the remotest times.

Professor T. E. Peet writes on "The Predynastic and Early Dynastic Period"; Dr. A. M. Blackman and Professor Peet are jointly responsible for "The Intermediate Period and Middle Kingdom"; "The Hyksos Period and New Kingdom" are dealt with by Professor P. E. Newberry; "The Reign of Tutankhamen" is most appropriately from the pen of Mr. Howard Carter; Dr. E. A. Gardner contributes "The Saïte, Ptolemaic and Roman Periods"; "The Coptic Period" is the work of Mr. Stephen Gaselee; and "Muslim Architecture" is described by Mr. K. A. C. Creswell. The editor and publishers record with profound regret the death of Sir Thomas Arnold, whose unfinished article on "Muslim Applied Art" has been edited and completed by Mrs. R. L. Devonshire; and of Dr. Hall, the proofs of whose chapter on "The Old Kingdom" have been corrected and the illustrations to it finally selected and arranged by Mr. S. R. K. Glanville,

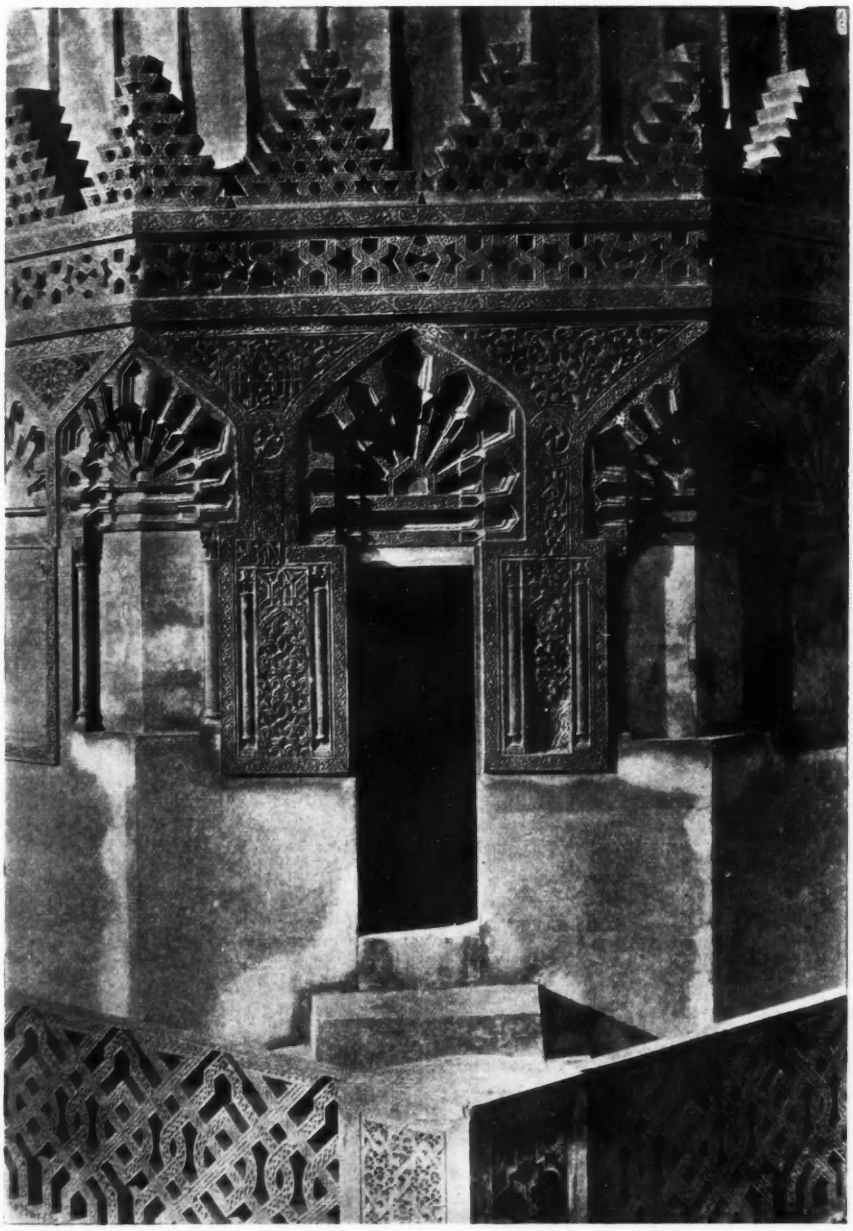


Mausoleum of the Imām Ash-Shāf'ei, built in A.D. 1211. The dome is a single shell of wood, with the ribs outside, the whole being covered with lead. At the summit is a bronze finial in the form of a boat.

[*From* The Art of Egypt through the Ages.]

of the British Museum. It has hitherto not been usual to find in works on Egyptian art anything approaching the adequacy with which Saracenic architecture and decoration are represented in the volume under review. This is a most welcome departure. As Mr. Creswell points out, "There are few visitors to Egypt who can fail to be thrilled by the charm of Islamic art, the splendid façades of the fourteenth and fifteenth centuries, the beautiful forms of its innumerable domes and minarets, and the extraordinary refinement of its ornament."

Particular attention is drawn to the six colour plates which adorn the book. Of these, perhaps the representation of a gilt and enamelled glass mosque lamp of the fourteenth century is the finest. This delicacy of treatment reaches an extraordinarily high level in the bronze-plated wooden doors from a thirteenth-century mosque in Cairo (p. 315), and the brass tray—inlaid with silver—of a century later, represented on page 316. In both instances very beautiful and characteristic Arabic inscriptions form integral parts of the design. The photographic reproduction on page 330 of the plaster frame for a coloured glass window of the early nineteenth century should, in my opinion, have been made the subject of a colour plate showing the iridescent and bejewelled effect of light transmitted through the glass. The plaster framework is an incident of construction and quite subsidiary to the actual window, as are the lead cames in the windows of Notre Dame. Only those who have been privileged to see the sun's rays slanting through a Cairo mosque dome window have any conception of the riot of living colour which is produced, as green, ruby, purple and rose scintillate and glitter like the flashes of a kingfisher's plumage.



Mausoleum of the Imām Ash-Shāf'ei. Detail (telephoto) showing the beautiful stucco ornament on the exterior of the zone of transition between the square mausoleum and the circular base of the dome. See photograph on facing page. [*From* The Art of Egypt through the Ages.]

While the format and appearance of the volume are alike admirable, this publication is likely to become an invaluable work of reference to the Egyptologist and Orientalist, and a really reliable source of information to an even wider public.

FREDERICK CHATTERTON

The Art of Egypt through the Ages. Edited by Sir E. Denison Ross. London: The Studio, Ltd. Price £2 2s. net.

THE SPECIFICATION WRITER

The Bayonet Connector for Gas Poker Burners

THE discovery and perfecting of an easy and reliable means for connecting flexible tubing to a gas-supply point on the wall, skirting or floor have had a stimulating effect during the last few years on the production of a number of labour-saving portable gas appliances. Among these appliances are the gas poker burner, small gas heaters, table lamps, standard lamps, gas irons, and the like.

As will be seen from figure one, the new bayonet connector for flexible tube connections consists of two parts: the flex socket, which is permanently attached to the wall, skirting board or floor, and is connected up to the gas supply, and the flex plug, which is permanently attached to the flexible tubing.

When it is desired to connect the flexible tubing to the gas supply, the

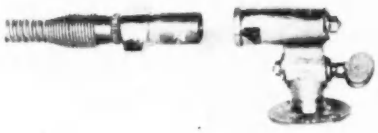


Figure one. The new bayonet connector for portable gas appliances. By a simple push and turn the flexible tube attached to the appliance may be connected up to the gas supply.

flex plug is inserted into the socket and given a turn. The turn not only ensures a gas-tight joint between the socket and the plug, but also allows the gas to flow through the plug and flexible tubing to the attached appliance. The gas flow may be varied by turning the plug backwards or forwards slightly.

The socket of the standard fitting is provided also with the ordinary type of gas tap. This, too, can be used for regulating the flow of gas; in addition, it can be used, at will, for cutting off the gas supply to the appliance when the flex plug is left connected to the flex socket. This type of fitting can be connected to any conveniently placed gas point. It can be fixed with the outlet end pointing in any direction other than an upward one. It must not be made to point upwards, as dust and dirt would collect in the interior. The fitting is quite small—it projects only 2½ ins. above floor level or away from the wall.

An alternative concealed type of fitting has been developed for use in cases where the gas supply can be brought behind the skirting. The wood has to be cut away to allow the connection to be made with a union, and a

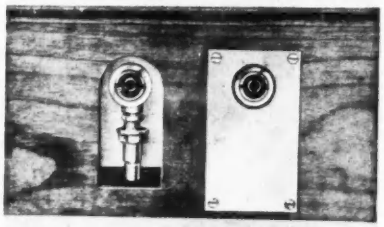


Figure two. An alternative type of flex socket for the bayonet connector. The gas supply is brought up behind the skirting, as shown on the left, and is hidden by a plate, as shown on right.

plate is used to which the fitting is held by screwed washers. This fitting is shown in figure two, and is available in various finishes, such as polished brass and bronze. If there is no tap on the gas supply, and one is considered desirable, it may be inserted immediately before the connectors. A plate having a flap in it for access is available for this purpose.

The internal action of both types of connector is the same. The gas seal is made by a rolling rubber joint ring, the rubber being in compression after insertion of the plug. In the event of the rubber ring becoming defective, its replacement by another can be carried out without taking the fitting to pieces.

One of the great advantages of the bayonet connection is that the gas point can be used as a means of supplying gas for more than one purpose. Take, for example, a room heated by smokeless solid fuel or coal. If a bayonet connector is fixed at the side of the hearth, it can be used for connecting a gas poker burner to light the fire without recourse to sticks and paper. Alternatively, it can be used for connecting a small portable gas-heater to the gas supply, so that during cold periods (when it is not desired to light up the solid-fuel fire) heat may be made instantly available. Any other appliance, such as a gas standard lamp or a gas iron, can be attached to the same point, provided the flexible tube to the appliance is equipped with the necessary flex plug.

Figure three. The new pattern gas poker burner for lighting up solid fuel fires and coke boiler fires without recourse to sticks and paper. The burner is connected up to the gas supply, lighted, and then pushed into the solid fuel.

The new pattern gas poker is shown in figure three. It has a small gas consumption, and will quickly light up solid-fuel fires in grates and coke boilers. With gas at, say, 8d. a therm, six coal fires can be lighted up at a total cost of 1d. for gas. What is more important, however, is the saving of trouble involved in the collection and carting of sticks and paper and in "coaxing" the fire to draw up, and of space required for the storage of fire-lighting materials. Again, however badly a fire may be laid, the gas poker burner will always kindle it. The poker is connected up to the gas supply by means of the bayonet fitting, and is lighted. It is then pushed under the heap of coal or coke, and in from 10 to 20 minutes the fire is well kindled.

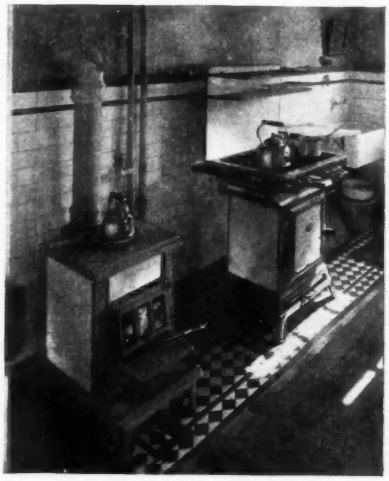


Figure four. An up-to-date labour-saving kitchen, with a modern enamelled coke boiler and gas cooker.

The poker burner has four parts: blade, shield, handle and end cap, any one of which is replaceable. It is made with shield, handle and end cap in aluminium, or with the handle in various colourings. The burner (or blade) has been specially made noisy in action, to prevent its being forgotten and left burning wastefully. It can be transferred easily from room to room for fire-lighting purposes, provided there is a flex socket in each room.

A gas poker burner may be used for lighting up the one solid-fuel fire in a house where every other room has gas fires. After spring-cleaning operations and the usual late spring sweeping of the chimney, it is not generally

considered desirable by the housewife to have the coal fire in action again. On the few days of the early summer and late autumn when a little artificial heat is required, the bayonet connection is used as a means of supplying gas to a small portable gas heater of the "bowl" type, which is placed on the hearth or in any other convenient position where local radiant heat is required.

At Chiltern Court, one of London's new blocks of flats, the five hundred

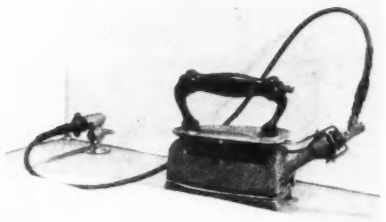


Figure five. The gas iron can be connected up to the gas supply by a push and turn if a bayonet connection is provided at a convenient point in the kitchen. With equal ease it can be disconnected and put away as soon as it is no longer required.

fireplaces are of the low-fire type, with rustless steel edgings and marble hearths and surrounds. They are designed primarily for burning solid fuel, but facilities have been provided for their easy conversion to other means of heating. A gas supply was taken to every hearth during the course of the building operations, and at the side of each fireplace a bayonet connection was fitted. To this point the flexible tube of the gas poker burner (one of which was provided for each flat) can be connected by a simple push and turn. The gas supplies to the fireplaces are of the concealed type, the supply pipes being taken under the hearths to points right under the fires.

The bayonet connection and poker burner can also be installed in kitchens and sculleries where coke boilers are used for heating the domestic supply of hot water. In such cases the poker is lighted and inserted in the fire, a little coke is put on the top of the previous night's ashes, and the fire is kindled in a few minutes. A typical example of such an installation is shown in figure four.

Foundations :—ii Piling

BY B. O. NASH

PILING is resorted to when the loads are heavier than the soil will safely carry without excessive spread. The piles are dependent for their bearing value on the skin friction of the material through which they are sunk, and often on the direct bearing of a lower stratum upon which they rest or into which the shoe is driven. Short piles are sometimes used owing to difficulties of excavation to a good bed through a soft upper stratum. If the upper stratum is fine waterlogged sand, the excavation of this material and the continual pumping of water would be dangerous to the foundations of adjoining buildings and a system of piling would be advisable.

Timber piles are used for temporary work, but they are liable to rot if subjected to alternate wet and dry, and are very little cheaper than reinforced concrete, which has almost entirely superseded timber for this purpose. There is also the difficulty in forming a satisfactory concrete foundation on the heads of timber piles. Again, if a satisfactory set has not been obtained with a concrete pile it can be lengthened and re-driven. This cannot be satisfactorily carried out with a timber pile.

There are two types of concrete pile, the precast and that cast *in situ*.

The Precast Pile

The precast pile is cast in moulds and is reinforced with longitudinal rods with helical or circular binding. The shoe is of chilled cast iron with mild steel straps cast into the concrete. In order that they can be driven as soon after casting as possible, a rapid-hardening cement is generally used, and, with careful maturing with plenty of water for the first forty-eight hours, they should be ready for driving in about fourteen days after casting. They are driven by a monkey varying in weight from 1 to 2½ tons, the head being protected by a steel cap padded with a bag of sawdust and iron filings, and having in addition a timber dolly in order to avoid breaking the head of the pile during driving. This driving is continued until the specified "set" is obtained, i.e. until the pile does not move more than a certain amount per blow of the monkey falling freely through a distance of two or three feet.

The disadvantage of precast piles is the uncertainty as to the actual length of pile required to be cast in order to avoid lengthening and re-driving, or alternatively wasting a portion of the pile if the set is obtained before the pile is driven for its full length. This can be largely overcome by arranging to drive several trial piles prior to the general casting of piles. These are driven at suitable positions on the site, so that they form part of the final scheme, and from the results of the driving the length of the remainder of the piles can be estimated. This works out satisfactorily if the strata are uniform, but it is better to have piles cast varying in length in order that, if it is found during the driving that longer or shorter piles are advisable, the requisite length will be to hand instead of having to wait for a fresh casting. It should be borne in mind that it is cheaper to cut off a few feet of pile head than to lengthen and re-drive a pile which is too short to obtain a satisfactory set. I had a case recently in which, although trial piles were driven, the actual piles used varied in length from twenty feet to sixty feet over a site area of only eighty feet by sixty feet.

In the case of a pile which has been driven for its full length without obtaining the specified set, the layout of adjoining piles if not already driven can be varied and extra piles used to reduce the load on each pile, or the pile can be lengthened and re-driven. This necessitates stripping the head of the pile to expose the reinforcement for a length of about three feet. A lengthening framework of rods similar to the main reinforcement is then securely wired on, generally with steel thimbles to ensure correct butting to the main reinforcement. The lengthening concrete is then cast *in situ*, and after maturing for two or three weeks the lengthened pile is ready for re-driving. When piles are cast *in situ* the waste entailed in cutting off piles which are found to be too long, and in lengthening and re-driving piles which are found to be too short, is avoided.

In Situ Piling

There are many systems of *in situ* piling which have been patented by various firms, but they are mainly divided into two categories.

The first consists of a lining tube which is driven into the ground in a similar manner to a reinforced concrete pile. A shoe is fitted to the bottom of the tube to facilitate driving, and if it is intended to withdraw the lining tube after concreting, the shoe is not fixed, but merely rests in the bottom of the tube. When a satisfactory set has been obtained, the skeleton pile framework of reinforcing rods is lowered into the tube with distance spacers to keep the framework central, and the tube is then filled with concrete. The driving is usually carried out with a steam hammer, and, if it is intended to withdraw the lining tube, this is done by reversing the action of the hammer, which, during withdrawal, gives a light tap downwards to consolidate the concrete and a heavier blow upwards on to a framework attached to the lining by two lugs, and has the effect of lifting the tube slightly out of the ground at each blow.

The second system of *in situ* piling consists of the removal of the material inside the lining tube, which sinks or is worked into the ground as the material is removed. In this case a pile driving-frame is not required and the system is similar to the ordinary boring operation. The soil is removed by a

tube with a cutting edge, which is either jumped down or rotated inside the lining tube or, when excavating through clay, by an auger. As the soil is excavated the lining tube sinks under its own weight or is worked down by hand. When, in the opinion of the engineer, a stratum has been reached which will support the load, the reinforced skeleton framework is inserted, and a mixing of concrete is placed in the tube. An airtight cap is fitted to the top of the lining and pressure of about 100 lb. per sq. in. is applied. This has the double effect of forcing the concrete out of the bottom of the tube, and the pressure acting upwards on the cap raises the lining tube.

Casting of Pile

This operation is repeated until the whole pile has been cast and the lining tube withdrawn. This system does not depend on the skin friction of the pile alone, as in forcing the concrete out of the tube, collars and irregularities are formed according to the resistance of the strata into which the concrete is being forced, thus providing a certain amount of actual bearing. This system has the great advantage that no noise or vibration is entailed and it can be satisfactorily used on many sites where the action of a pile-driver would be inconvenient or dangerous to adjoining buildings. It is also very suitable in congested areas where it is not practicable to erect a pile-driving frame.

Piles cast *in situ* have the great advantage in so far as that they can be of any length dependent on the driving or the materials penetrated. The lining tubes are in six or seven feet lengths, and fresh lengths are added to the top as the tube sinks. There is not therefore the waste so often entailed in the use of precast piles.

For wall foundations the piles would be either in pairs or would be driven at intervals of five to eight feet as required by the load to be carried, and the foundation concrete would be designed as a continuous reinforced concrete beam with a distributed load and having points of support at each pile head.

Minimum for Stanchion Bases

In the case of stanchion bases, a minimum of four piles is advisable, the total number being dependent on the load to be supported and the estimated bearing value of a pile. The piles must be spaced symmetrically with the upper load and should not be closer together than three feet. After the piles are driven, the heads are stripped and a framework of reinforcing rods is securely bound to the reinforcement of the piles, and the whole encased in concrete.

(Concluded.)

LOWEST TENDER PASSED OVER

Councillors Angry at Choice of Architect

SHARP criticism of the recommendation of the Housing Committee of the West Ward Council of the Hackthorpe Council over the appointment of an architect was made at a recent meeting. The following report has been taken from *The Westmorland Gazette* :

The Housing Committee reported that at its first meeting it discussed the question of the appointment of an architect, and resolved that in respect of the Patterdale portion of the scheme Mr. A. Knewstubb, of Penrith, should be authorised to proceed. It was also resolved that Messrs. Dobell and Baldry, with the architect and inspector, should visit the sites at Patterdale and report on means of water supply and sewerage. It was also resolved that an architect for the rest of the houses in the area be advertised for. At a subsequent meeting Mr. Knewstubb reported that the sub-committee had viewed the two proposed sites at Patterdale, and were awaiting further information about a water supply at the Glenridding site. Five applications were received for the post of architect, and it was resolved on the motion of Mr. Turner, seconded by Mr. Baldry, that the committee recommend the appointment of Mr. Knewstubb, on the terms of his application, as architect for the proposed forty houses.

Mr. R. Winster asked to be furnished with the names of the five applicants, and the amounts they required to do the work. He also asked whether the committee had chosen the architect who had tendered to do the work for the least money ?

The Chairman : Pretty nearly.

5s. a House Difference

Mr. Wood : There was only a matter of 5s. a house.

Mr. Winster said they advertised for an architect, and if applicants had all the qualifications necessary, even if there was only 5s. a house difference, it meant £10 on forty houses. He moved that the matter be referred back to the committee. He might only be by himself in the opinion, but if a gentleman like Mr. Shaw, of Kendal, was turned down, even when he was 5s. a house less, as he was told, he would like to know the reason. Why did the committee advertise at all ? Why did it not merely elect the man it wanted ?

Mr. Dobell : Is there any objection to our knowing the names and the amounts of their tenders ? We can go into committee.

The Chairman : I strongly object to the last remark—" the man they wanted."

Mr. Winster : I can only conclude that there must have been some special reasons, if they are equally good men, for re-electing a man who is £10 more.

The Chairman : There are.

Mr. Winster : May this meeting have the information ?

After further exchanges the Chairman was moving the adoption of the report when Mr. Dobell said : Will you have the courtesy to answer my question ?

The Chairman : You are a member of the Committee.

Mr. Dobell : I could not get to the meeting.

The Other Tenders

The Clerk said the following were the applicants : Mr. R. Morden Rigg, Penrith, £13 10s. per house: Mr. J. Hutton, Kendal, £10 10s.: Mr. A. Knewstubb, Penrith, £10 15s.: Mr. M. Shaw, Kendal, £10 10s.: Mr. Morland, Kendal, R.I.B.A. scale.

Mr. Turner seconded the adoption of the report, and said Mr. Knewstubb was worth 5s. a house more. He agreed to carry out certain conditions which the others did not agree to in their applications.

A Member : They were never asked.

Mr. Turner : We decided that Mr. Knewstubb was the most likely to carry them out. For any member of a committee to cast suspicion on the committee is not sport—not cricket.

Mr. Dobell : If you had told us at the beginning that there were conditions there would not have been this bickering.

Mr. Hindson asked why houses at Patterdale were to be £4 5s. each more than those at other places.

The Chairman : Very likely because they are fewer in number.

Mr. Hindson : There would be special plans to draw for each.

The Chairman : Who told you that ?

Mr. Hindson : No doubt there will if they are in different parts.

The Chairman : There may be more paper plans, but that won't be difficult.

Mr. Winster moved that the matter be referred back to the committee. He thought that the Council had no right to throw away £10.

Mr. Winster : These two gentlemen are equally good architects of excellent standing in the county, and it seems to me there must have been some " back " reason why they were not taken.

The report was adopted, only two voting against.

Publication Received

Mechanics of Buildings. By Arthur D. Turner. London : Sir Isaac Pitman and Sons, Ltd. Price 5s. net.

COMPETITIONS OPEN

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions, etc., were obtainable from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions were obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

LAW REPORT

ALLEGED EYESORE

Shaw v. *Brodribb. Chancery Division. Before Lord Justice Romer*

THIS action raised many points of interest to house-owners in country districts. The plaintiff, Mr. G. C. Shaw, of High Beeches, Great Missenden, Bucks., took the view that sheds erected by Mrs. L. F. A. Brodribb, of Early Rivers, Nags Head Lane, Great Missenden, were æsthetically displeasing to him and he sought an injunction restraining her from retaining on her premises four sheds. He said the sheds were detrimental to his property and other property he owned, and further he set up that the defendant had acted contrary to her restrictive covenants, which ruled out any type of building but dwelling and garage, and forbade structures for animals, except at certain specified distances from the back line of the property.

Defendant replied that she had only put on the land a garage and a thatched summer-house and goat houses. These were not in the permitted belt, but she contended that plaintiff had acquiesced in this and said plaintiff himself had grazed sheep.

Evidence was given on behalf of the plaintiff that the structures the defendant had erected were unsuited for the type of property and that they were detrimental to it.

His lordship entered judgment for the plaintiff, without costs, as in his opinion the plaintiff had failed as to every structure but the goat-house. In his view the hen-houses were outside the covenants, but as to the goat-house it must be moved into the permitted belt. In this case plaintiff took the view that all the sheds were æsthetically displeasing to him. But this point had already been before the Courts, and a decided authority made it plain that what would succeed in that type of complaint was not the annoyance or grievance of a sensitive person, but a disturbance which would trouble the mind or pleasure of an ordinary sensible English inhabitant of a house. His lordship had listened carefully to the evidence and the arguments of counsel and he came to the conclusion that the plaintiff's peace of mind had not been affected, though his æsthetic susceptibilities might have been. He was therefore satisfied that plaintiff had not been annoyed within the meaning which the courts had already decided must be given to the words.

THE ARCHITECTS' DIARY

WEDNESDAY, SEPTEMBER 16

R.I.B.A., 9 Conduit Street, W.1. Exhibition of work submitted for the R.I.B.A. (Archibald Dawnay) Scholarships. 10 a.m. to 7 p.m. (Saturdays, 10 a.m. to 2 p.m.) Until September 25. **10 a.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Visit to the Shipping, Engineering and Machinery Exhibition at Olympia.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Manchester and District Branch. Visit to the Wardle (Watergrove) Reservoir.

INTERNATIONAL ILLUMINATION CONGRESS. At Cambridge. Until September 19.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. (Last day.)

FRIDAY, SEPTEMBER 18

NATIONAL SMOKE ABATEMENT SOCIETY. Annual Conference. Liverpool. Until September 20.

SATURDAY, SEPTEMBER 19

Sunrise, 6.39 a.m. Sunset, 7.8 p.m.

MONDAY, SEPTEMBER 21

INTERNATIONAL ILLUMINATION CONGRESS. At the Royal Institution, London. Informal Meeting, 11.30 a.m. Reception of the delegates, 3 to 4.30 p.m. Meeting at the Queen's Hall, Langham Place, W.1. 8 to 10.30 p.m. **11.30 a.m.**

NORTHERN POLYTECHNIC, Holloway, N.7. Commencement of New Session.

TUESDAY, SEPTEMBER 22

INTERNATIONAL ILLUMINATION CONGRESS. Conference of the Institution of Electrical Engineers, at the Kingsway Hall, W.C. 10.30 a.m. Conversaziones at the Royal Institution. 8.30 p.m. **10.30 a.m.**

WEDNESDAY, SEPTEMBER 23

R.I.B.A. STATUTORY EXAMINATION. Latest date for submission of applications for examination for the office of district surveyor. (Fee £3 3s.)

INTERNATIONAL ILLUMINATION CONGRESS. Faraday Exhibition Private View, Albert Hall. 10 a.m. to 4 p.m. British Association Centenary meeting. Delegates' Reception, Albert Hall. 3 p.m. Gen. Smuts (President, British Association) opens the Exhibition, Albert Hall. 4.30 p.m. Presidential Address to the British Association by Gen. Smuts, at the Central Hall, Westminster, S.W.1. 9 p.m. **10 a.m.**

INSTITUTE OF FUEL. At the Chemical Society's Premises, Burlington House, W. "The Reactivity of Coke. A Report to the Blast Furnace Committee, Iron and Steel Industrial Research Council." By J. G. King and J. H. Jones. **6 p.m.**

THURSDAY, SEPTEMBER 24

INTERNATIONAL ILLUMINATION CONGRESS. Garden Party at the National Physical Laboratory, Teddington. 3 to 6 p.m. Soirée at the Royal Society, Burlington House, W. 8.30 p.m. **3 p.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Newcastle. "Modern Decoration." By John Gloag and Mrs. Grace Lovat Fraser, F.I.B.D.

FRIDAY, SEPTEMBER 25

INTERNATIONAL ILLUMINATION CONGRESS. At the Dorchester Hotel, Park Lane, W. Dinner given by H.M. Government to representative delegates and guests. Chairman: The Rt. Hon. Ramsay MacDonald, P.C.

SATURDAY, SEPTEMBER 26

Sunrise, 6.50 a.m. Sunset, 6.53 p.m.

MONDAY, SEPTEMBER 28

L.C.C. SCHOOL OF BUILDING, Ferndale Road, Brixton, S.W.4. Commencement of New Session.

TUESDAY, SEPTEMBER 29

R.I.B.A., 9 Conduit Street, W.1. Exhibition of drawings, including the whole of the British Section of the recent exhibition held in Berlin during the Congress of the International Federation of Housing and Town Planning

WEDNESDAY, SEPTEMBER 30

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow.

SATURDAY, OCTOBER 3

Sunrise, 7.2 a.m. Sunset, 6.37 p.m.

MONDAY, OCTOBER 5

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First General Meeting of the Session.

BARTLETT SCHOOL OF ARCHITECTURE, University College, Gower Street, W.C.1. Commencement of New Session.

TUESDAY, OCTOBER 6

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. Council Meeting, followed by "The Great Decorative Artists—Past and Present." By Major A. A. Longden, D.S.O.

SATURDAY, OCTOBER 10

Sunrise, 6.14 a.m. Sunset, 5.22 p.m.

Secretaries of architectural and allied societies are invited to forward particulars of their forthcoming meetings and visits for publication on this page. They should be addressed to the Editor at 9 Queen Anne's Gate, S.W.1.

TRADE NOTES

In the July–August number of *Paint*, a bi-monthly magazine issued by the Walpamur Co., Ltd., of Rathbone Place, W.1., the following short article on "Chalking" is published:

"Chalking is the condition of a paint coating which has become loosely bound and powdery. In the ordinary course of events the normal deterioration of a sound paint film should take place by a very slow process of chalking, as such takes place from the surface downwards, and if unaccompanied by any other defect, the paint retains its preservative value until the process of chalking has passed through the whole thickness of the paint coating.

"Rapid chalking at an early stage is, however, a very different matter, and when this takes place the result is that instead of natural wear and tear we get premature disintegration, which becomes a serious defect. Chalking of this description indicates clearly that either the paint is at fault or is unsuitable to withstand the particular conditions to which it is exposed. When the medium in which the paint is ground and mixed begins to perish, it ceases to bind or fix the pigment particles of the paint, and a powdering of the surface results.

"White lead, particularly if undermatured, is subject to chalk. This tendency is accentuated when the paint is exposed to sea air. The pigment in combination with linseed oil forms lead soap; this chemical union renders the oil—under the action of salt—more easily destroyed as a binding agent. Under such conditions the use of zinc oxide in combination with white lead will minimize the tendency of chalking.

"The first sign of chalking is loss of gloss, and may be readily detected, even in its mild stage, by wetting and gently rubbing, when the colour will work up with the moisture. Paints exposed to severe atmospheric conditions should either be well bound with suitable varnish medium or be high in oil to avoid or minimize the risk of chalking. The use of unsuitable paints, such as flat paints on exterior work, will result in the defect. In preparing a chalky surface for repainting it is necessary to remove all traces of powdery material by washing and rubbing down in order that the maximum adhesion of the new paint may be obtained."

*

Messrs. Parker, Winder and Achurch, Ltd., of Broad Street, Birmingham, have recently placed on the market a new automatic oil check and spring door closer. Built, it is claimed, on entirely new lines, it is known as the Page automatic door closer. It is a little under 9 ins. in depth, only a fraction over 1½ ins. in diameter, and fits very closely on the door stile (wood fixing 1½ ins. by 2¾ ins.), whilst on the door frame there is a very narrow plate connected with the main barrel of the door spring by a resilient arm. The finish is chromium plated. Whilst the door closer is new to this country, it has been tried out abroad, and, it is stated, some 48,000 have been sold in Sweden alone; whilst hundreds are in use in the U.S.A. It is British made, and its principal advantage is, it is claimed, the impossibility of damaging or loosening it by slamming or roughly closing the door, and is also suitable for light, medium and heavy doors (up to 2¼ ins. thickness). It can be supplied right- or left-handed.

Inside the cylinder is a spindle operated by a spiral spring, the tension of which is affected by the revolving of the spindle caused through opening and closing the door. The tension of the spiral spring increases when the door is open, and actuates the door so as to close it. A checking effect is obtained by the oil in the fluid chamber, which works in conjunction with a valve to obtain a cushioning action in order to retard a too sudden motion and to prevent slamming. Should, however, the door be closed with excessive force, tending to shut the door more quickly than the checking means in the apparatus allows, the special resilient arm, marked (a) in the accompanying illustration, is so made that it will yield and prevent any damage or loosening of the working parts.

Adjustment, it is also claimed, is rarely required, as the door closer is sent out already adjusted. If adjustment becomes necessary, however, it is made by means of the hexagon nut (d) and locking screw (b).

A list of the Page door closer may be obtained from Parker, Winder and Achurch, Ltd., at the address given above.

*

Messrs. Birmabright, Ltd., of Dartmouth Road, Smethwick, announce that Mr. David Hamilton, B.SC., A.M.I.C.E., has been appointed the firm's representative for the London area. His address is as follows: Abford House, Wilton Road, Westminster, S.W.1. Telephone number: Victoria 0932.

*

The Anglo-Persian Oil Co., Ltd., have placed a further contract with the Leyland and Birmingham Rubber Co., Ltd., for Leyland rubber tiling. This will make a total of over 22,000 square yards of Leyland rubber floors installed in the premises of the oil company. Other notable contracts for Leyland floors executed during the past twelve months include the *Empress of Britain*, 8,000 square yards; *Winchester Castle*, 4,500 square yards, and *Warwick Castle*, 3,500 square yards.

The Page Automatic Door Closer.

*

In the list of contractors for the King George Hospital, Ilford, printed on page 352 of the last issue of THE ARCHITECTS' JOURNAL, the manufacture of the synchronized clocks was inadvertently attributed to the wrong firm. Messrs. Gent & Co., Ltd., were the firm responsible for these, in addition to the turret clock, while Messrs. Landis and Gyr supplied the staff signalling.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

St. Cecilia's Church, Liverpool (pages 363–366). General contractor, C. J. Doyle. Sub-contractors: E. and C. Smitton, stonework; Best and Lloyd, Ltd., electric light and fittings; Fraleys, marble wall; Stratford-upon-Avon Guild, stained glass windows; Morris-Singer Co., Gesso panel, altar rails, etc.; Jos. F. Ebner, wood-block floors; Bennet Furnishing Co., seating; Ed. Wood & Co., steelwork to roof; Wormells, Ltd., roof tiling.

Sperry's Gyroscope Factory, Great West Road, Brentford (pages 367–368). General contractors, Patman and Fotheringham, Ltd. Sub-contractors: A. Dawnay and Sons, Ltd., constructional steelwork; Henry Hope and Sons, Ltd., windows and roof glazing; John Boulting and Sons, heating and hot water; Electrical Installations, Ltd., electric lighting installation; Adamsez, Ltd., sanitary fittings; Diespeker & Co., Ltd., hollow tile floor and roof construction, and terrazzo flooring; Sankey Sheldon, steel lavatory partitions; Mather and Platt, Ltd., sprinkler installation; Helical Bar and Engineering Co., Ltd., reinforcement to floors; S. W. Francis & Co., Ltd., roller shutters; British Magnesite Flooring Co., Ltd., jointless flooring; Fredk. Sage & Co., Ltd., office screens and balustrading; Penfold Fencing, Ltd., chain link fencing; British Reinforced Concrete, Ltd., reinforcement to roadways and paths; Tondu Brick Co., facing bricks; Synchronome Co., electric clocks.

Chalet, Stockgrove Park, near Leighton Buzzard, Bedfordshire (Supplement). General contractors, J. W. Falkner and Sons. Sub-contractors: Daneshill Brick Co., bricks above waterline; Farman Bros., reed thatching; J. L. Emms, lead finial; Caston & Co., wrought ironwork.

ANNOUNCEMENT

Mr. J. Craven Pritchard, of Venesta, Ltd., Vintry House, Queen Street Place, E.C.4, desires the address of Mr. H. Selby, in order to return his designs submitted for the Building Trades Exhibition Stand Design Competition.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed by the BERMONDSEY B.C. : Showroom, corner of Rotherhithe Street and Raymouth Road, for Messrs. E. and C. Deavin; warehouse, Tower Bridge Road, for Messrs. W. H. Wagstaff and Son, Ltd.

Messrs. Murrell and Pigott are to reconstruct 1, 3 and 5 Jamaica Road, BERMONDSEY.

The BERMONDSEY B.C. has approved plans for the erection, by the works department, of forty-four flats on the Rotherhithe Street clearance area.

The BERMONDSEY B.C. has obtained sanction to borrow £17,190 for the Vauban Street rehousing scheme, which includes the provision of shops and a warehouse.

The DAGENHAM U.D.C. is to erect a branch library.

The Herts Education Committee has acquired a larger site at Leggats Way, WATFORD, for the erection of an elementary school.

The WATFORD Corporation proposes the clearance of several areas and the rehousing of displaced persons on various estates, and the erection of about 130 houses on the Leavesden Green estate.

Plans passed by the WATFORD Corporation : Recreation room, Lower High Street, for National Omnibus Co.; alterations, Victoria Stores, St. Albans Road, and alterations, "King's Head" public-house, High Street, for Messrs. Benskins; machine shop, Cherry-tree Road, for Messrs. Kempster and Williams; new roads on the Leavesden Green estate, for Watford Gardens Estate Co.; house, Cassiobury Drive, for Mr. E. Mushet; additions, Ashby Road, for Board of Guardians; extensions, Baryta Works, Cassio Bridge, for Cassio Photographic Paper Co.; two houses, Orchard Drive, for Mr. E. W. Puddifoot; alterations and additions, Harwoods Road, for the Watford West Conservative Club; house, Tolpits Lane, for Mr. Longman; house, Hampstead Lane, for Mr. T. H. Simmons.

SOUTHERN COUNTIES

The HASTINGS Corporation has obtained sanction to borrow £3,058 for the erection of eight houses in Grove Road.

The PORTSMOUTH Corporation recommends the Park Road depot site for the erection of the new central fire station.

Plans passed by the PORTSMOUTH Corporation : Fourteen houses, Thurbern Road, for Mr. R. J. Winnicott; two houses, Burrowfields Road, for Mr. E. Pulford; four houses, Hawke Street, Portsea, for Mr. A. A. Grubb; alterations and additions, Eastney cinema, Eastney Road, for Mr. H. J. Cook; two shops, Copnor Road, for Messrs. Tanner Bros.; additions, 84 Kingston Road, for Portsmouth Hostel for Boys; six houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell; two houses, St. Simon's Road, for Mr. M. R. Berney; dairy depot and club-room, Heidelberg Avenue, for Mutual Co-operative Society, Ltd.; additions, "Thatched House" public-house, for Messrs. J. J. Young and Son, Ltd.; bank premises, High Street, Cosham, for Messrs. A. E. Porter and Son, on behalf of National Provincial Bank, Ltd.; twenty-one houses, Butts Road, for Messrs. G. McCormick and Son; two houses, St. Chad's Avenue, for Mr. F. Devenish; reconstruction work, 66 King Street, for Free Church Hostel, for Mr. F. J. Privett; five houses, off Tangier Road, for Messrs. W. H. Westbrook, Ltd.; twelve houses, off Tangier Road, for Mr. C. V. Thorpe; additions to Co-operative Hall, St. Mary's Road, for Mutual Co-operative Society, Ltd.; shop and flats, High Street, Cosham, for Mr. G. Smees; eight houses, Algier Road, for Mr. S. J. Todd; eight houses, Carshalton Avenue, for Mr. E. W. Payne.

The ROCHESTER Corporation is to erect ninety-two houses on the Temple Farm estate.

The WORTHING Education Committee is to enlarge the council school at Durrington.

SOUTH-WESTERN COUNTIES

Mr. G. A. Drake is to erect a cinema in Exeter Road, BRAUNTON, Devonshire.

The BRISTOL Corporation is seeking sanction for a loan of £33,500 for new public baths.

The Devon Education Committee is to enlarge the senior council school at HATHERLEIGH.

The PLYMOUTH Watch Committee is to prepare plans for the provision of a public bus station and car park in Glanville Street.

The TAUNTON Corporation is to extend the market house, at a cost of £11,000.

Plans passed by the TORQUAY Corporation : Alterations and additions, Lincombe Hall Hotel, Lower Woodfield Road, for Lincombe Hotel, Ltd.; two houses, Audley Park estate, for Messrs. H. Kershaw & Co.; four houses, Barton Hill Road, for Mr. F. White; printing offices, George Street, for Messrs. Bendle Bros.; six houses, Pine View Gardens, for Mr. H. J. T. Cruse; station master's house, Torquay station, for Great Western Railway; alterations, St. John's Schoolhouse, Braddons Road, for Girls' Friendly Society; seven houses, Warberry Vale estate, for Mr. H. I. Heard.

The TORQUAY Education Committee is to purchase land on the Cary estate for the erection of an elementary school.

The TORQUAY Corporation has passed plans, submitted by Mr. Banbury, for the development of the Shiphay estate, Collaton.

MIDLAND COUNTIES

The BURTON-ON-TRENT Corporation has obtained sanction for the purchase of a site for the erection of an infant welfare centre.

The BURTON-ON-TRENT Corporation has obtained sanction to borrow £13,000 for the erection of thirty-six houses in Woods Lane.

The British Goodrich Rubber Co., Ltd., is to erect a factory in Derby Road, BURTON-ON-TRENT.

The CHESTERFIELD Corporation is to erect twenty-eight houses on the Highfield estate, from plans prepared by Mr. W. A. Derbyshire.

The KESTEVEN (LINCS.) C.C. is to enlarge the council school at Little Batham, from plans prepared by Mr. C. B. Metcalfe, the county architect.

The MARKET HARBOROUGH U.D.C. has approved plans, prepared by Messrs. Coales and Green, for the erection of fifty houses on the by-pass road.

Plans passed by NORTHAMPTON Corporation : Two shops, Birchfield Road, for Messrs. S. G. Sale & Co.; two houses, Ridgeway, for Messrs. A. Glenn and Sons, Ltd.; factory extensions, St. James Street, for Messrs. Wareing, Ltd.; shops, Weedon Road, for Mr. W. Q. Adams.

NORTHERN COUNTIES

The CARLISLE Corporation has failed to obtain State aid for the scheme for the erection of new municipal buildings.

The MANCHESTER Corporation has obtained sanction to borrow £250,000 for further housing advances.

The Ministry of Health is to hold an inquiry into the proposal of the MIDDLESBROUGH Corporation to erect a fire station, at a cost of £34,000.

The PENRITH U.D.C. is to erect 120 houses on the council's new estate.

The RAWTENSTALL Corporation is to erect forty-eight houses on the Lower Carr Farm estate.

The Office of Works is to erect a telephone exchange at Woodseats, SHEFFIELD.

The STOCKTON-ON-TEES Corporation is to erect new municipal offices on the Church Row site, from plans prepared by Messrs. Lanchester and Lodge.

Plans passed by the STRETFORD U.D.C. : Fifteen houses, Low Moss Lane, for Messrs. Freeman, Evans & Co.; alterations, motor works, Market Street, for Mr. F. Lewis; municipal offices, Talbot Road, for U.D.C.; alterations, Ashburton Road, for Lloyds Bank, Ltd.

The WAKEFIELD Corporation has asked the housing architect to prepare plans for dealing with sites on the six clearance areas scheduled for re-development.

The West Riding C.C. has asked the WAKEFIELD Corporation to co-operate in a proposed joint scheme for the provision of an orthopædic hospital.

The WAKEFIELD Education Committee has approved plans for doubling the accommodation at the school centre in Ings Road; and for additional science and art and staff accommodation at Lawefield Lane senior school.

The WAKEFIELD Corporation has asked the housing architect to prepare plans for the erection, by direct labour, of another 200 houses on the Eastmoor estate.

The WAKEFIELD Corporation has asked the Hospitals Joint Committee to expedite the scheme for the provision of a clinic at Clayton Hospital, for early mental cases.

Plans passed by the WAKEFIELD Corporation : Works extensions, Denby Dale Road, for Spencer Wire Co., Ltd.; house, Cheviot Lane, for Mr. W. H. Ogden; alterations, Kirkgate, for Messrs. George Blakey and Son, Ltd.; additions and alterations, Presbytery, Wentworth Terrace, for Messrs. Newbald and Hartley, on behalf of Canon Leteux; house, Eden Avenue, for Mr. J. Redfearn; works extensions for Wakefield Express Services, Ltd., in Southgare, for Messrs. Simpson and Moxon; four houses, Flanshaw Lane, for Mr. J. P. Firth; alterations, Wellington Hotel, Kirkgate, for Beverley Bros.; billiard-room, Southgare, for Mr. L. Waring, on behalf of the West Riding Athletic Club.

The WAKEFIELD Education Committee is to prepare plans for the erection of an elementary school on the Eastmoor estate.

SCOTLAND

The ABERDEEN Education Committee is to erect an elementary school on the Tyrie estate.

The GLASGOW Education Committee is to prepare plans for the erection of a clinic in the Gorbals district.

Mr. Matthew Martin is to erect shops, house and garages in Meadowell Street and Amulree Street, GLASGOW.

Messrs. John Lawrence (Glasgow), Ltd., are to erect twenty-nine bungalows in Great Western Road, Drumchapel, GLASGOW.

The GLASGOW Corporation Streets Committee has sold land in Dumbarton Road, Dalmuir, to the Clyde Valley Electrical Power Co., for the erection of a sub-station.

The GLASGOW Education Committee has obtained sanction for a loan of £82,500 for the extension of the High School of Glasgow.

WALES

The CARDIFF Corporation is proceeding with the erection, at Llandough, of a large hospital which will eventually provide approximately 1,000 beds. For the present only part of the scheme is being undertaken, provision being made for 340 beds.

MISCELLANEOUS

Plans passed by the DOUGLAS (I.O.M.) Corporation : Alterations, 66–7 Strand Street, for Mr. E. A. Deane; twelve houses, Kensington Road, for Messrs. Creer Bros.

The NEWPORT (I.O.W.) Corporation has purchased five acres of land at Whippingham, for a housing scheme.

Plans passed by the NEWPORT (I.O.W.) Corporation : Saw mills, for Messrs. H. W. Morey and Sons, Ltd.; additions, premises in Avondale Road, for Mr. F. Chiverton.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_1	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_1	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENS-FERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKE-FIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers. . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, ... ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1¼" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
FITTINGS.			
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ¾" . . . ,,	9 9
,, ,, ¾" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ¾" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	3" s. d.	4" s. d.
	F.R. 7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 9
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal	5" s. d.	6" s. d.
	F.R. 5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" s. d.	4" s. d.	6" s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	3 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	3 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 0
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		10	0
" to form basement n/e 5' 0" deep and cart away	"		11	0
" " 10' 0" deep and cart away	"		11	6
" " 15' 0" deep and cart away	"		12	0
If in stiff clay	add		3	0
If in underpinning	"		5	0
Digging, return, fill and ram	"		5	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			6
" " to trenches	"			6
" " extra, only if left in	"			3½
Hardcore, filled in and rammed	Y.C.		14	0
Portland cement concrete in foundations (6-1)	"	1	13	6
" " " (4-2-1)	"	1	18	6
" " " underpinning	"	2	2	0
Finishing surface of concrete, spade face	Y.S.			9

DRAINLAYER		4" s. d	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each		0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
½" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
½" do.	"	3	4	0
¾" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1½" pulley stiles, 1½" heads, 1" inside and outside linings, ½" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		£	s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.		17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1	3	0
Do. stanchions with riveted caps and bases and do.	"	1	2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1	0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	18	0
Do. in flashings	"	2	0	6
Do. in covering to turrets, etc.	"	2	7	6
Do. in soakers	"	1	13	6
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	5 8
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	1	
Extra, only stop ends	Each	1	0	
Do. angles	"	1	6	
Do. outlets	"	3	0	
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6	
Extra, only for shoes	Each	2	6	
Do. for plain heads	"	5	6	

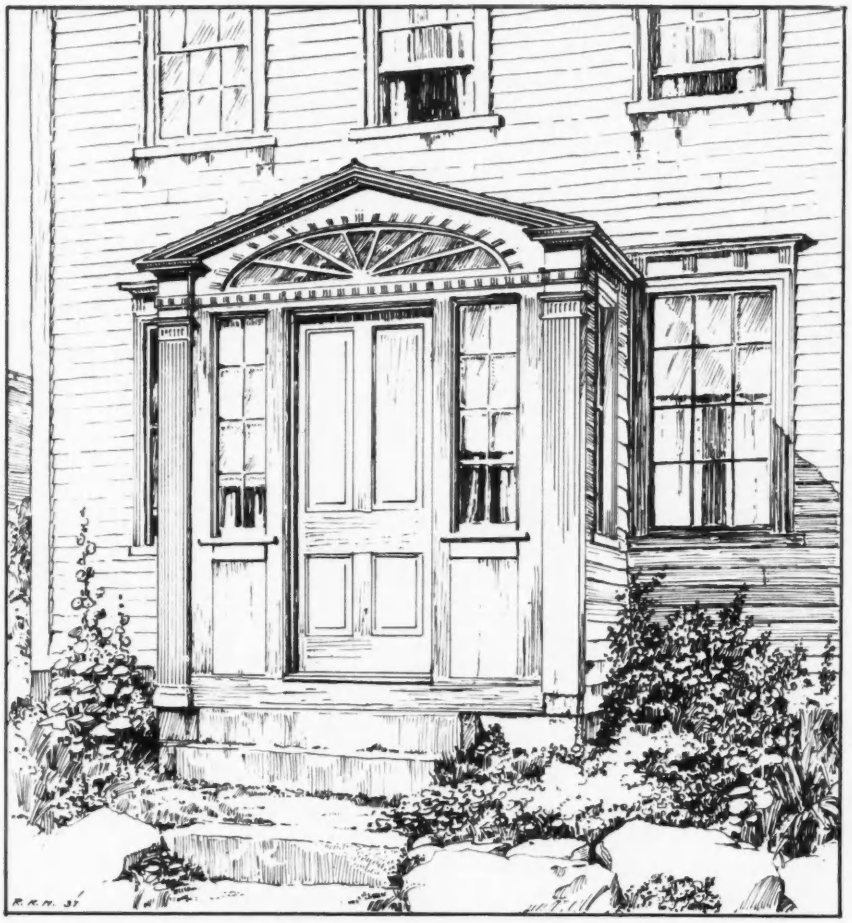
PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " "	"	1	1	0
Extra, only for small quadrant angle	F.R.			9

GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"		2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

FROM THE NEW WORLD : 3

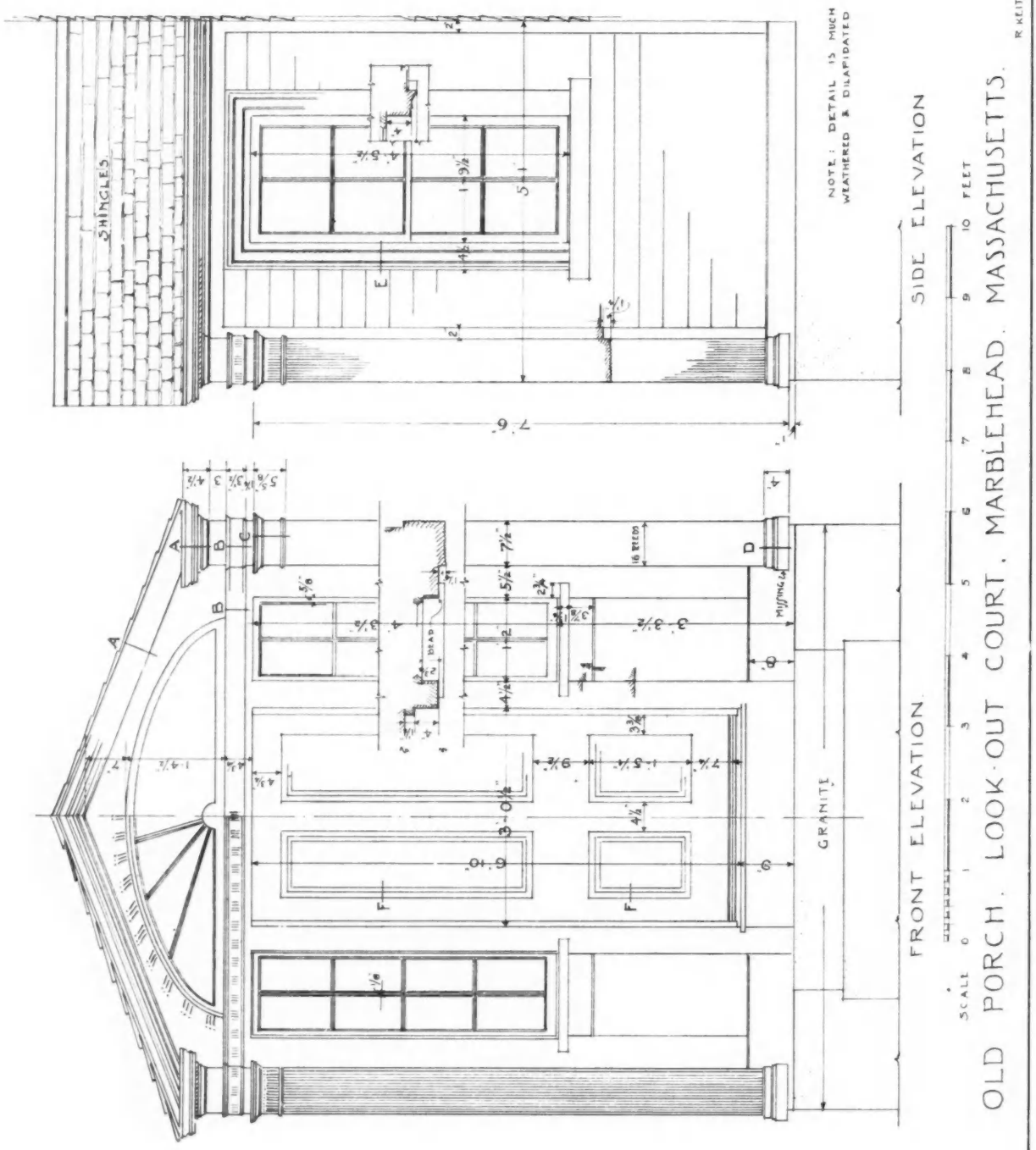
MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS



OLD PORCH, LOOK-OUT COURT, MARBLEHEAD, MASSACHUSETTS

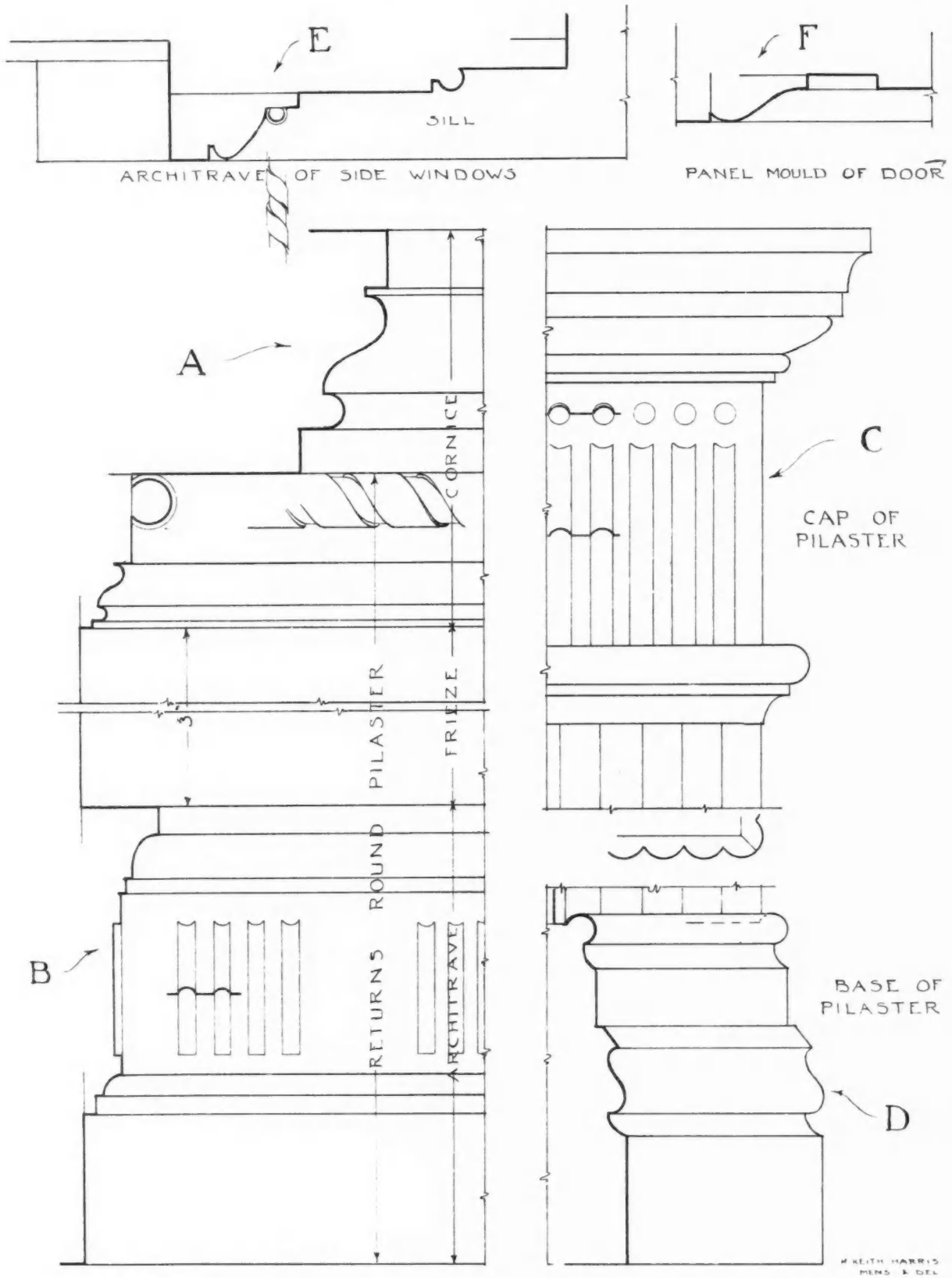
THIS old porch is an interesting example of the use of thin casing, built up or planted on. The pilasters are formed of grooved boarding. In addition to the pleasing proportions as a whole, the delicate mouldings and "rope" enrichment are worthy of notice. Its most useful lesson lies, perhaps, in demonstrating what can be done with "stock" material, at a nominal cost.

The details on the following pages, which have been measured and drawn by R. Keith Harris, are reproduced to scales of $\frac{1}{2}$ in. = 1 ft. and two-thirds full size respectively.



OLD PORCH, LOOK-OUT COURT, MARBLEHEAD, MASSACHUSETTS.

R. KEITH HARRIS DELS. & DEL.



2/3-FULL SIZE DETAILS

OLD PORCH LOOK-OUT COURT MARBLEHEAD MASSACHUSETTS

THATCHED CHALET BY A LAKE

ERECTED IN STOCKGROVE PARK, NEAR LEIGHTON BUZZARD, BEDFORDSHIRE

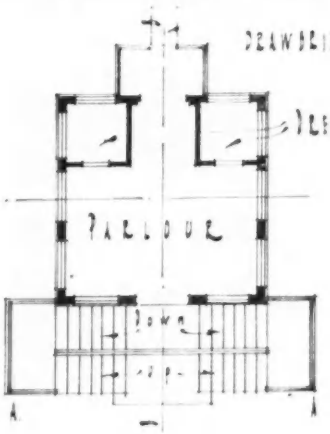
[*W. Curtis Green, A.R.A., and Partners, Architects.*

A SIDE VIEW. ON THE LEFT IS A DRAWBRIDGE: ON THE RIGHT THE LANDING STEPS

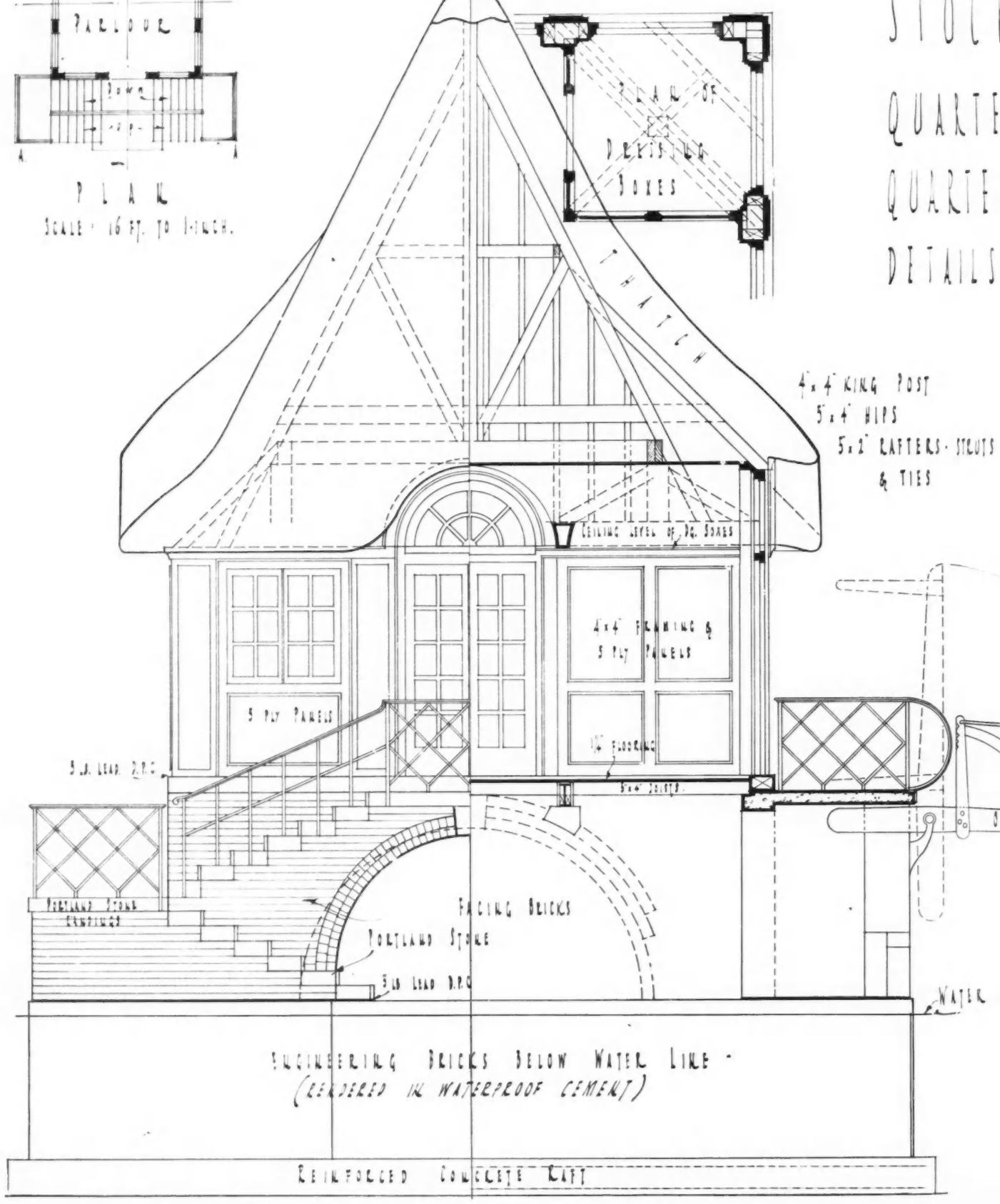
AS will be seen from the drawings overleaf, drawn to scales of 16 ft. = 1 in., ¼ in. = 1 ft., and one-quarter full size, the chalet provides a parlour and two dressing boxes, beneath which is a space, measuring about 6 ft. at its highest point above water level, for the storage of boats. The lake is some 2½ acres in extent and has been formed in the park of a large house, recently completed. Where the chalet is situated, the ground slopes steeply to the water side. Communication from the shore is effected by a drawbridge, and on the front of the chalet, facing the lake, is a pair of steps, of Portland stone, leading down to the water.

The chalet stands, below water level, on a foundation of engineering bricks, rendered in waterproof cement, and laid upon a reinforced concrete raft. Facing bricks have been used for the base, above water level, the upper portion of the walls being constructed of 4 in. by 4 in. wood framing and 5-ply panels. The roof is thatched and is surmounted by a cast-lead finial.

THE
STOC
QUARTE
QUARTE
DETAILS



PLAN
SCALE · 16 FT. TO 1-INCH.



ELEVATION AT A·A (ON PLAN)

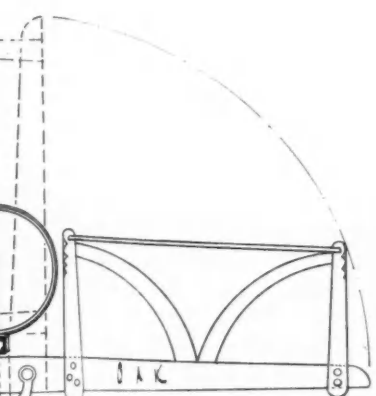
SECTION B·B (ON PLAN)

HE CHALET
TOCKGROVE -

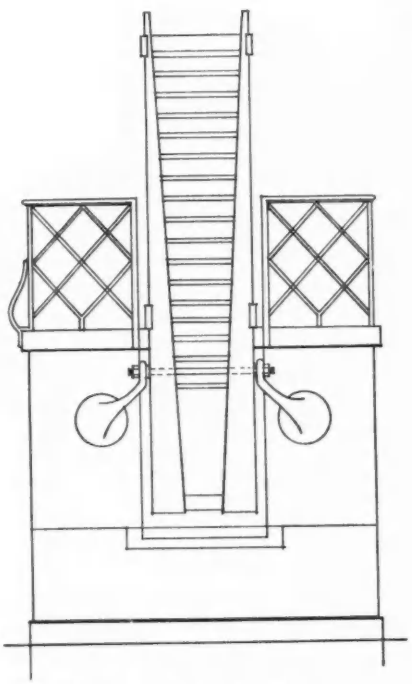
UARTER FULL SIZE &
UARTER OF ONE INCH TO ONE FOOT
TAILS -

ST

ERS - STRUTS
ES

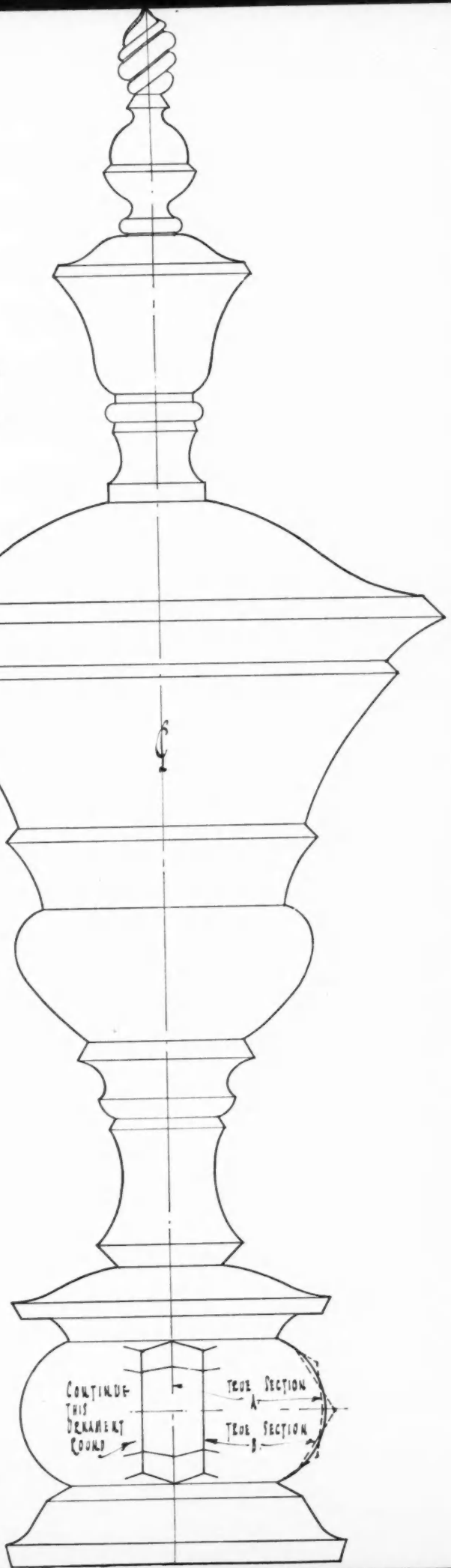


WATER LINE



ELEVATION OF
DRAWBRIDGE UP.

CAST LEAD FINIAL
QUARTER FULL SIZE

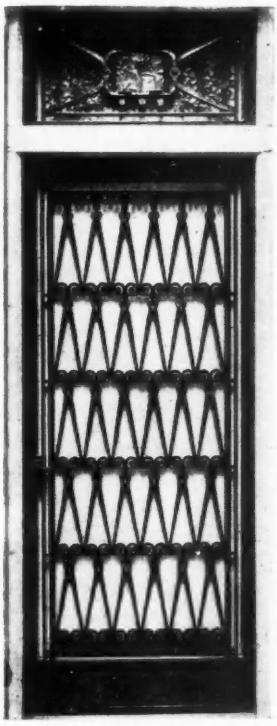


W. CURTIS GREEN. A.R.A.
& PARTNERS -
ARCHITECTS.

1.
PI

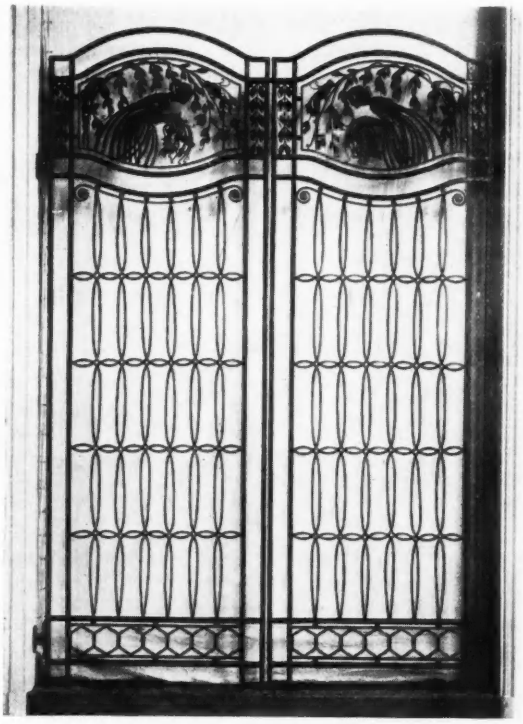
SELECTED PRECEDENTS:

THE MODERN WROUGHT-IRON DOOR ABROAD



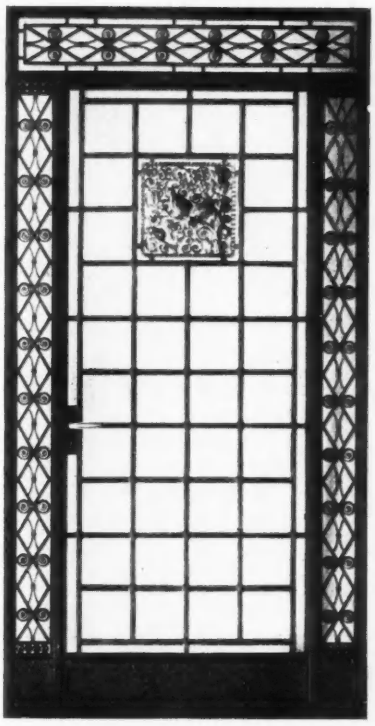
[Designed and executed by Charles Piguet.

1. STREET DOOR GRILLE, PIGUET'S SHOWROOMS.



[Designed and executed by Charles Piguet.

2. DOUBLE-OPENING LIFT ENTRANCE TO A LARGE BLOCK OF FLATS.



[Designed and executed by Charles Piguet.

3. DOOR WITH BACKING OF GLASS FOR A SUITE OF OFFICES.

MODERN wrought-iron front doors are comparatively rare in England, except in the case of public buildings like town halls. Although plenty of examples of the French type of glass-backed entrance grille can be found in Mayfair houses, and blocks of expensive flats of the kind which ape the mannerisms of French appartements de luxe (such as those in and about Portland Place), they nearly always seem to evince a rather exotic air. Wren remarked that even the Italians admitted the French were supreme in wrought-iron work: a dictum which is just as true today. "Wrought-iron," Jean Lamour, King Stanislas's master-smith, who wrought the magnificent gates of Nancy, used to teach his apprentices, "is dowered with majesty, delicate fancy, and charming surprises. It can assume all plastic forms, displaying at need both the energy of sculpture and the boldness of architecture. Everything that issues from the forge should have the solidity of a monument."

Among the acknowledged maîtres-ferronniers of contemporary France—men like Desvallières, Poillerat, Bergue, Brandt, Schenck, Szabo, Szetlak and Subès—none is more representative of the great French tradition in this medium than Charles Piguet.

Figure 1 shows the street door of M. Charles Piguet's showrooms and workshops in the Rue Creuzot, in Lyons. Here the design is based on repetitions of the smith's pincers (his most important tool after the hammer); while the fanlight medallion is enclosed within two pairs of wide-open pliers. Figures 2 and 3 are typical examples of Piguet's delicate design and workmanship. The former, a lift entrance, is particularly elegant; but the motif of the stooping girl, gathering a nosegay under a hanging bough, though charmingly graceful, is perhaps too feminine and sentimental a fantasy to be quite appropriate in a medium synonymous with strength. The latter combines a severely plain cross-bar pattern with a surround of scroll and lozenge design. The central plaque is a richly ornate and decidedly intricate composition of birds and flowers, rather reminiscent of the work of Edgar Brandt.

Figures 4 and 5 are Bavarian ecclesiastical examples of a Neo-Primitive type, designed by Professor O. O. Kurz for two new churches in Munich. The first is really a sort of rood screen in which a galaxy of Christian symbols in ribboned iron—the Alpha and Omega, sun, moon, and stars, and profiles of hovering angels and the Baptism in Jordan—serves as a background for the symbolical knocker of a small crucifix cast in bronze. The second, a double-winged chapel door, is simply a light framework on which texts and prayers, spelt out in bold wrought-iron lettering, and an attenuated Maltese cross above, constitute the only decorative features.

P. MORTON SHAND

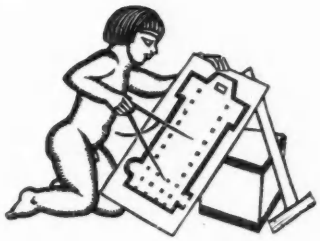
4. *ROOD SCREEN IN THE GABRIELSKIRCHE, MUNICH*

[*Designed by O. O. Kurz.*

5. *DOUBLE DOORS TO LADY CHAPEL, SEBASTIANSKIRCHE, MUNICH*

[*Designed by O. O. Kurz.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, SEPTEMBER 23, 1931

THE STONE OF CONTENTION

ANY principle which has once been generally accepted is in danger of being forgotten, and has constantly to be defended by new arguments. For instance, no sooner was the use of local materials in rural building a widely agreed axiom, than it was suffered to lapse, and needs now reaffirmation of the kind made last month at Chipping Campden.

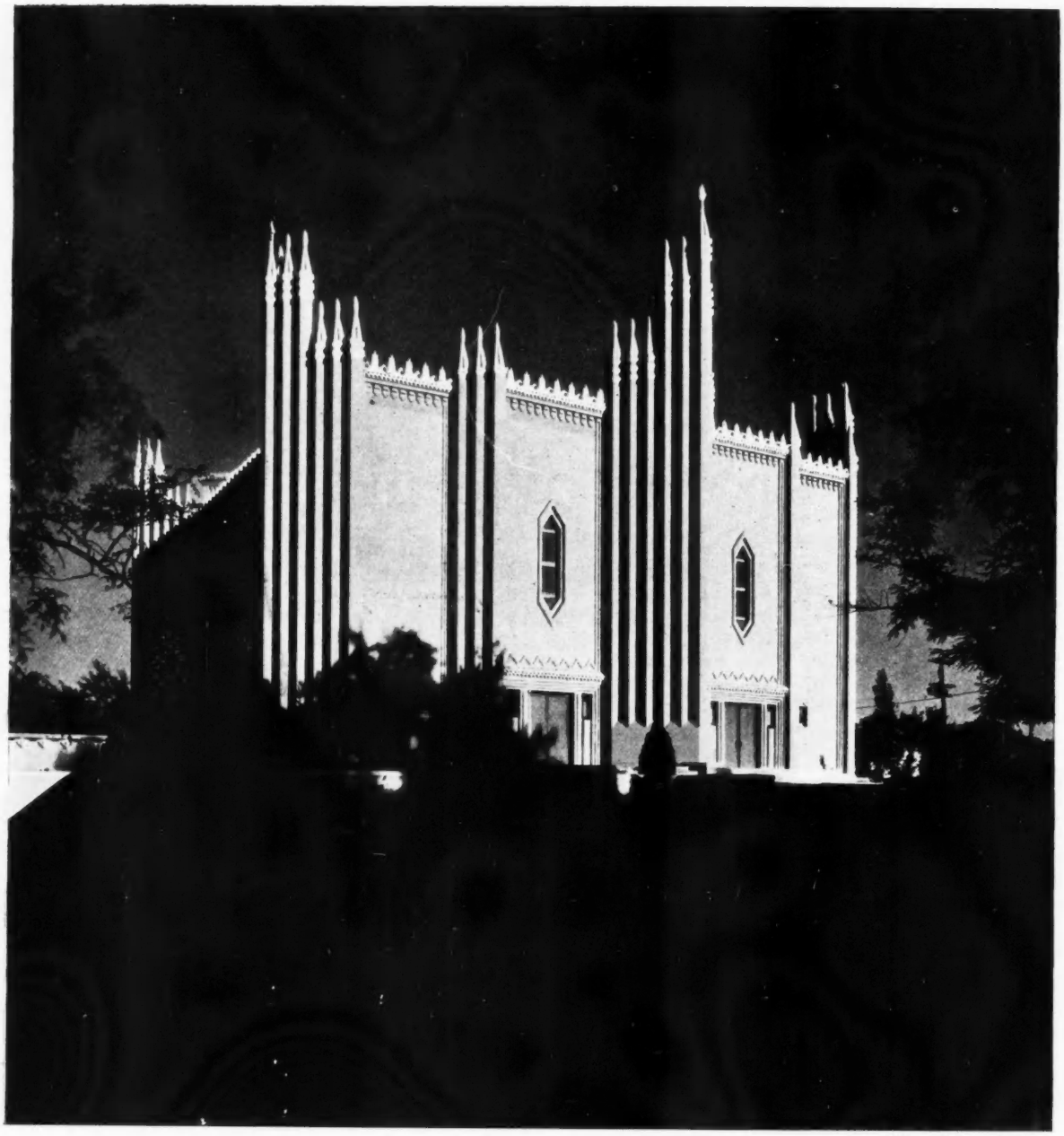
It is said, with considerable truth, that there is no longer any rural architecture, because means of transport and ribbon development have made the whole of England one vast city; and that therefore the use of local materials is a sham and delusion. For practical purposes, Sussex and Wales are one. The inhabitants of Lewes like the same things and have the same needs as the dwellers in Brecon. The difference in the cost of concrete today is negligible.

We have been told also that thatched cob cottages and Cotswold stone walls and roofs are just things that arrived from the use of materials which were the best of their time, and that if we would build as our fathers did we must look at things in the same way as they did, namely, that the cheapest efficient material was proper to be used. Living now, they would have built with bricks at Chipping Campden and roofed with slates at Old Basing. That this view of our ancestors is correct may be doubted, for they dearly liked a pattern; but even allowing it true, it does not contain the whole truth for us. It does not outline the whole of our problem. Our ancestors were modelling in the rough, but they left us pictures and patterns which are so satisfying that we cannot disregard them and start with a clear sheet. The intrinsic and original beauty of their farms, villages and cottage groups is so modest that it can be made all too easily to look pathetic and faded by an alien technique of building; just as a print dress and sunbonnet will look washed out beside the florid pyjamas of a Lido lady, and the quilted smock will seem grey by the stiff contrasts of men's evening dress.

There is a note in English rural scenery which belongs to no other. Italy and Spain and even France give us to understand that Nature keeps her savageness beneath her beauty, and is after all an untamed beast, subjecting man's dwellings to flood, earthquake and storm, and to reactions in defiance of and in contrast to Nature's moods. In England the land and the buildings have been, to a marked extent, modelled by the same hands, and have achieved ripeness together. The squires and dames and labourers of the sixteenth to the early-nineteenth centuries made English rural culture. They planned and planted great parks with avenues of trees, lakes and copses; they cleared wastes and brakes, and enclosed and divided common lands with hedges and rows of trees. They preserved the winding roads and the field paths. They sheltered their buildings from wind and sun by bastions of trees. To them was largely due, especially in the eighteenth century, the supersession of colour-washed walls and thatched roofs, materials needing periodical renewal and freshening with permanent materials—stone, brick and tile, which have only recently come to their full fruition and ripest beauty. Although this note of ripeness and of a perpetual autumn has suffered diminution from the increase of pasture over arable, so that the cornlands of Wiltshire and Berkshire have it more than the meadow country of Gloucestershire and Warwickshire, for instance, the appearance still broadly exists.

Our forefathers, who may perhaps have built entirely as a modernist works, for efficiency, had not this mellowness to consider, for it had not then arrived. It has come as an addition to our programme, and we can no more insensitively disregard it than we can disregard the presence of some Old Master in adding pictures to a wall. The times in which we live and the new materials which are the product of today must influence our work in such a way that tradition is developed, not broken.

We have been willing to pay for extra height of rooms and larger windows; it ill becomes us to be miserly in payment for the local material and ways of workmanship which alone will ensure the future of rural architecture being as lovely as its past.



[*Barry Byrne, Architect.*

A MODERN AMERICAN ESSAY IN ENGLISH PERPENDICULAR

The design of the Roman Catholic Church of Christ King, in the Parish of the Sacred Heart, Tulsa, Oklahoma, U.S.A., recalls the appearance of some of the chapels built in Ireland in the early nineteenth century. The main material is brick, and the dressings and crestings are in terra-cotta, designed in collaboration with the sculptor, Alfonso Iannelli.

NEWS & TOPICS

Lt.-Colonel G. Val Myer, F.R.I.B.A., the architect for Broadcasting House, Portland Place, W.1, which is illustrated and described on pages 395–400 of this issue.

THE ECONOMY EQUATION

THE Government's economy instructions are being given far-reaching effect in every part of the country. Work, much of it planned as part of the wise economy of urban development, has been thrown over, as surplus cargo is thrown from a sinking ship. Especially is this true of school building. Cutting down the building grant from 50 per cent. to 20 per cent. means in effect that the Government is no longer concerned to realize the importance of education in the districts in which it has increased population through subsidized housing.

*

Economy proposes a new equation in which spending on new works is to be reduced to the point where it will cause new indirect burdens, through the medium of added unemployment, out-door relief and heavier local rates. The sooner this equation is resolved the better. At the moment there is panic among local authorities, who have all been reading their ultimatums from the Government. A little later, perhaps, expenditure will be reviewed in a clearer light, and a nearer estimate taken of the extent to which well-laid plans of needed development are to be set aside.

ART, INDUSTRY AND EXHIBITIONS

The habit of tackling a problem without plan lies heavy upon the English. Planning in its larger civic aspects has been abandoned for over a century; and when faced with some defect or abuse in the industrial or social scheme, the need for "something to be done" is so strong upon us that haste, rather than thought, controls the action that fulfils the need. In the correspondence that has followed Mr. Carrington's letter about the work of the Board of Trade Committee, the idea of an exhibition of the products of industrial design has, with one or two exceptions, been the main theme of those contributing to the discussion. The fact that there is a discouraging shortage of anything fit to exhibit has been dismissed.

*

The fact that manufacturers in this country are unaware of the economic significance of good design has been entirely subordinated to a Utopian discussion about exhibitions; and already we are provided with exhibitions that disclose our woeful ineptitude in the design of everyday articles. And in the near future, when tariff walls may be giving our manufacturers a greater sense of security, it will be harder than ever to carry out the work of educating industry, first as to what is meant by good design, and secondly to an understanding of its money value in the world market. Until this work of education is begun, an exhibition is a piece of dangerous futility. Until this work of education is planned, it cannot begin. And until we disperse the muddled atmosphere engendered by this talk of exhibitions, the need for a plan for improving industrial design will not be apparent to industrialists, nor to their self-and-government-appointed advisers.

CERAMIC MATERIALS

The very young building materials section of the Ceramic Society held a conference last week at Leicester, during which the remarkable advances, especially with regard to technical and artistic matters, were the subject of congratulation. It is very true that terra-cotta and faience has much improved within recent years, and will continue to improve in measure as it ceases to imitate stone forms, and assumes character of its own, using colour and pattern. And here some definite part of its progress lies with architects; modern architecture alone can carry forward these materials to new, logical and greatly extended uses.

HOUSING BY PRIVATE ENTERPRISE

The National Federation of House Builders are right to point to the need for housing the lower-paid working classes, as they do in a manifesto which they have sent to Members of Parliament, though it has never seemed to me that private enterprise has itself taken up this unprofitable task. I would like to be clear in my mind as to what class of building is represented by the figures showing houses completed by local authorities on the one hand and by private enterprise on the other, and what proportion of the latter are available at rents which the lower-paid workman can afford.

*

Nobody wants to go on paying a subsidy if it can be abundantly proved that the class which the subsidy is designed to help can be provided with accommodation without its help; but I, for one, have no knowledge that such is the case, unless it be taken for granted that this working class will be housed at lower standards than have so far obtained.

*

A great deal still seems to hinge upon the cost of building and the possibilities of still further reducing the cost of the small house, without sensible diminution of its accommodation. It has been pointed out by several writers to the Press, and it is evident, indeed, from one's knowledge of recent Trade Union negotiations, that wages are as low as they are likely to be in the future. Further reductions in the cost of small houses can come therefore either from a reduction in size, which is hardly possible; a closer density, or the building of longer connected blocks of houses, which has not been sufficiently explored; better management; or the substitution of cheaper and more easily handled materials for those now nearly universally employed. It might seem, after so many years of housing experience, that all these avenues had been thoroughly explored, but I am not so certain that a reorientation of our attitude to open "garden-city" development would not lead to further economies without loss of those very tangible benefits which this method has produced.

L.C.C. HOUSING

Interesting statistics have just come to hand showing that the number of tenants in London County Council houses now amounts to the formidable total of 213,000. The extent of the financial burden undertaken by the

ratepayers of London on behalf of better housing is indicated by the fact that, for the year ending March, 1930, there was a deficiency of £674,000, this figure of loss representing the difference between the rents actually received from the tenants and the economic rents which would be required to repay the interest on the money spent on the houses. A considerable item of expenditure is the work involved in the management of the new estates, entailing, in addition to the normal work of management, such as collection of rents and the execution of repairs, the handling of a great number of applications for tenancies, investigation of the circumstances of the applicants, the rationing of accommodation according to the applicants' needs. The L.C.C. is attempting to cut down to a minimum the cost of the bureaucratic staff necessary to administer the housing estates.

A CURIOUS FAÇADE

There is a curious façade in Leinster Gardens, Kensington. Not actually curious to look at, as was that stucco house in Oakley Street, Chelsea, which René Sphears, I think it was, covered with a hundred best examples of Italian detail, all in plaster, but for other reasons curious. It presents very much the appearance of its neighbours, has windows and doors, steps and porticos. Yet nobody goes in, nobody comes out. Tradesmen have called in vain, and a burglar one very dark night broke a jemmy on its unresisting door. It is, in fact, a sham façade.

★

Years ago, when the Metropolitan Railway cut through the square, in the way railways do, they left a culvert between the houses that was so unsightly, and looked so like a broken tooth in an otherwise perfect set, that the railway directors had to make some redress to stem the torrent of abuse with which the irate square dwellers overwhelmed them. They filled the gap with its appropriate scenery stuck on to a great wall, and retired to their holes in the ground. No. 23 Leinster Gardens is the best decoy address in London.

THE RETURN OF EROS

From time to time I hear rumours of the return of Eros to his former position in Piccadilly Circus, but surely we may now expect to have some definite information as to the date when this much-desired home-coming may be effected. If this enforced absence goes on much longer, there will arise a generation which knows not Eros, and this will, indeed, be a pity. For although the statue can now be seen in the Victoria Gardens on the Embankment, and we can make closer inspection of it there than would be possible at Piccadilly Circus, the fact remains that few people now look at it, whereas if it were restored to its old position of civic eminence it would once more become familiar to thousands. I have heard it said, of course, that Eros could only be seen to best advantage when set against the background of Nash's Quadrant, and while I agree that the scale of the latter accorded with the fountain better than do the more ponderous stone edifices now occupying the west side of Piccadilly Circus, that is not a reason for banishing from this unique site a statue which, in the opinion of many, is the most beautiful in all London.

★

A favourite view of Eros in the old days was one in which the form of this masculine divinity was seen silhouetted against the sky at a point midway between the converging curves of the cornices of the Quadrant, and while these latter are higher today than formerly, a not dissimilar picture would still be possible if Eros were restored to his original position. It may be hoped that the elaborate bronze base of the fountain, which provided exactly the right architectural preparation for it, will not be scrapped, nor in its place be erected some far too simple and undecorative pedestal of stone. I notice that this bronze base is not now to be seen in Victoria Gardens, but I hope, nevertheless, that it is in safe keeping for future use. There is another reason why we should all wish to hasten the return of Eros, because in that eventuality it may be assumed that the classic elegance of the statue will be a challenge to the unspeakable vulgarity of the east side of the Circus, and so hasten to banish from our sight the simian antics of the electric signs which now, to such a great extent, determine the spiritual atmosphere of the place.

PETERBOROUGH'S NEW TOWN HALL

The Peterborough Town Council, now that their new Town Hall is nearing completion, are staggered by its size, the rooms appearing so numerous and so vast that they, the councillors, cannot forbear to wonder at the magnificence of the programme they set before the competitors. Those who know the city may share the amazement of its rulers, mixing with amazement some little amusement at the grandiose attempts to balance the expense of an over-large town hall by building it above a string of shops. I like the idea of a deputation calling upon Messrs. Marks and Spencer for their support. Nothing wrong in it, of course, so long as you don't pretend that your town hall is something that it is not, or greater than it ought to be.

WHITE AND COLOUR WASHES

Why are people so frightened of using white and colour washes ? The land is sprinkled with the most abominable trash pretending to figure as domestic building. The materials, as many have not hesitated to remark, are both cheap and nasty, and the construction barely withstands the rigours of our variable climate. Decked out with white and other charming colours, renewable at will and with the least expense, these blemishes, which cause so much annoyance to all who set store by our inheritance of worthy building, would be given decent covering. Even converted railway carriages and old tram-cars, when washed with colour, become nearly charming, and their inhabitants, as the owners of whited sepulchres, would no longer suffer the execrations and sneers of their betters. It should be remembered that white, even though as whitewash it be humble, is the colour of aristocracy, of kings and presidents. In the East it is held in great esteem. " May thy face be whitewashed and thy head touch the sky," said Mirza Firoiez to Hajji Baba, prognosticating great fortune and social elevation. It should be good form to whitewash. Let us make it good form.

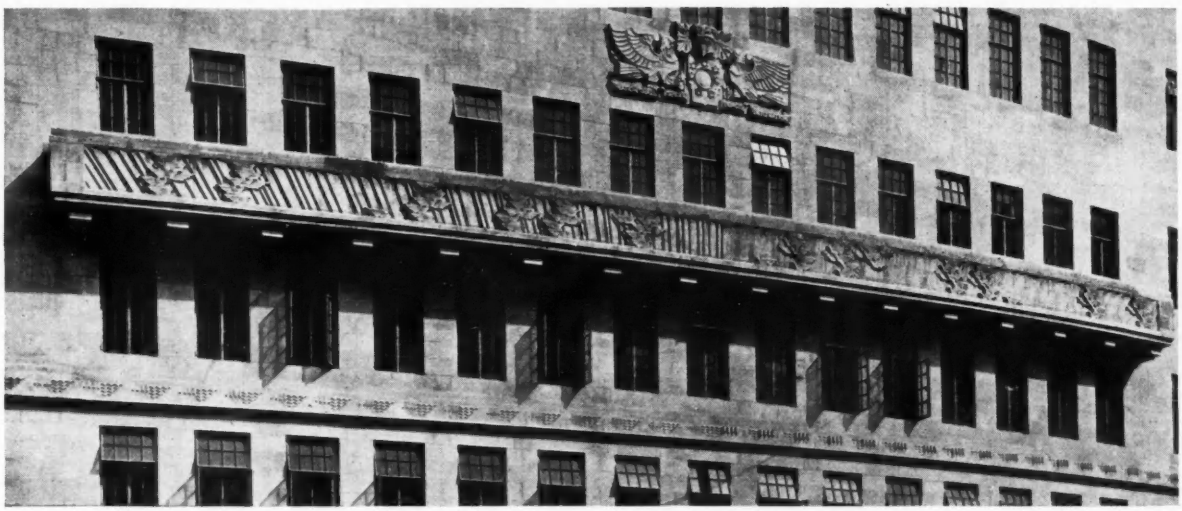
AN ARCHITECT IN RUSSIA

It was necessary that Mr. Clough Williams-Ellis should go himself to Russia before architects should be given an understandable picture of the five-year architectural plan. His series of articles, " An Architect in Russia," now appearing in *The Manchester Guardian*, are clearly the account by a sensible man of what is actually being done there—not only the big idea of the thing, about which there is no lack of news, but the detailed matters of craft by which we are used to judge the character of work.

ASTRAGAL

BROADCASTING HOUSE, PORTLAND PLACE, W.

DESIGNED BY G. VAL MYER



At fourth-floor level on the Portland Place façade are carved the B.B.C.'s coat-of-arms and the motto, "Nation shall speak unto Nation." Along the balcony the carving shows the "Birds of the Air" against a background of the "Rays of the Setting Sun." On the floor below is a running ornament of the "Waves of the Sea."

BROADCASTING HOUSE, from the planning and constructional point of view alone, is surely one of the most singular buildings ever erected in this country, if not in the world. It has been designed for a dual purpose, namely, to serve as a broadcasting station and to house the administrative staff of the B.B.C. The big problem encountered in a building of this exceptional character was to devise means to eliminate the possibility of extraneous noises penetrating from the street and of sound being transmitted from studio to studio.

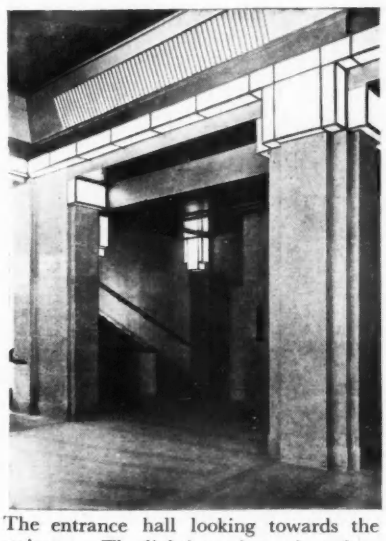
This extraordinary riddle has been solved by an ingenious plan and special methods of construction. The building, in fact, is designed as *two* buildings, one within the other, and at first blush seems to bear close resemblance in the principles of its construction to a thermos flask.

The inner building, or core, reaches from the sub-basement to the roof, and forms a tower, in which all the studios, with their accompanying lounges and waiting rooms, are accommodated.

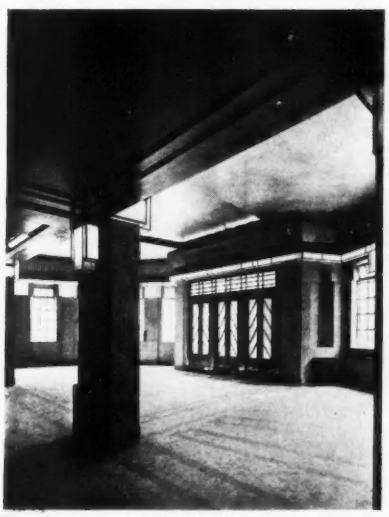
The main feature is the large concert hall, three stories in height, with separate entrances and exits from Portland Place and Langham Street. This hall will hold about a thousand people, and is provided with a waiting room for the artists and a large lounge for the public. Altogether, there will be twenty studios, ranging in size from the small "News" or "Talks" studio to the large concert hall. On the eighth, the top floor, is a large central room, equipped with the most modern apparatus, and effective for the entire range of studios.

The studio tower is surrounded completely by a corridor, which may be likened unto a "moat," serving all the administrative and executive offices in the outer ring or outside of the building. In addition to this lateral insulation of the tower, elaborate precautions were taken to ensure inter-studio silence, including the provision of "buffer" sections or states between one floor of studios and another. The walls of the tower are built in solid brick without stanchions as a further precaution against noise, and those of the outer ring are of steel-frame construction, faced with Portland stone. It was desired to make as much use of the site as possible. The building, therefore, sinks to a depth of three floors below ground level, and the elevation rises to the maximum permissible height.

In the foundation work special problems were encountered. First, complications arose by the presence of a hundred-year-old brick sewer which runs obliquely across the south-west corner of the site for about 160 ft. This had been laid in the chalk below the strata of the London blue clay and sand, and is still in use; its main function being that of taking the surface-

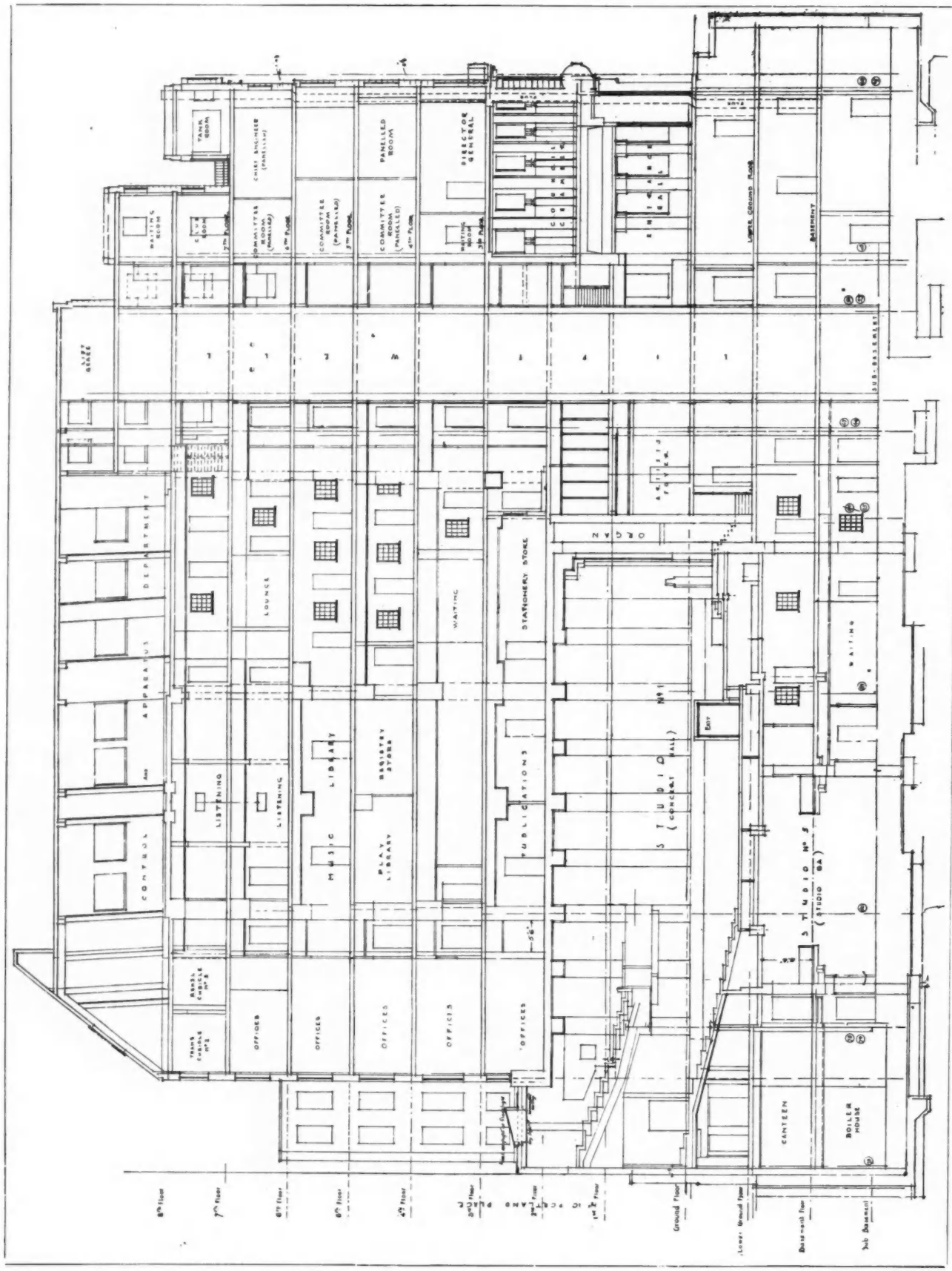


The entrance hall looking towards the staircase. The lighting scheme is amber. In the hall on the left is the counter of the B.B.C. bookshop.



The entrance hall looking towards the main doors which are of bronze. The walls are of Hopton Wood marble, and the floor is of mosaic.

D



This section indicates the ingenious methods adopted for insulating the studio tower, both laterally and vertically. The former is obtained by surrounding the tower with a corridor and an outer ring of offices; the latter by the provision of "buffer" states between one studio floor and another. The concert hall accommodates about a thousand people.

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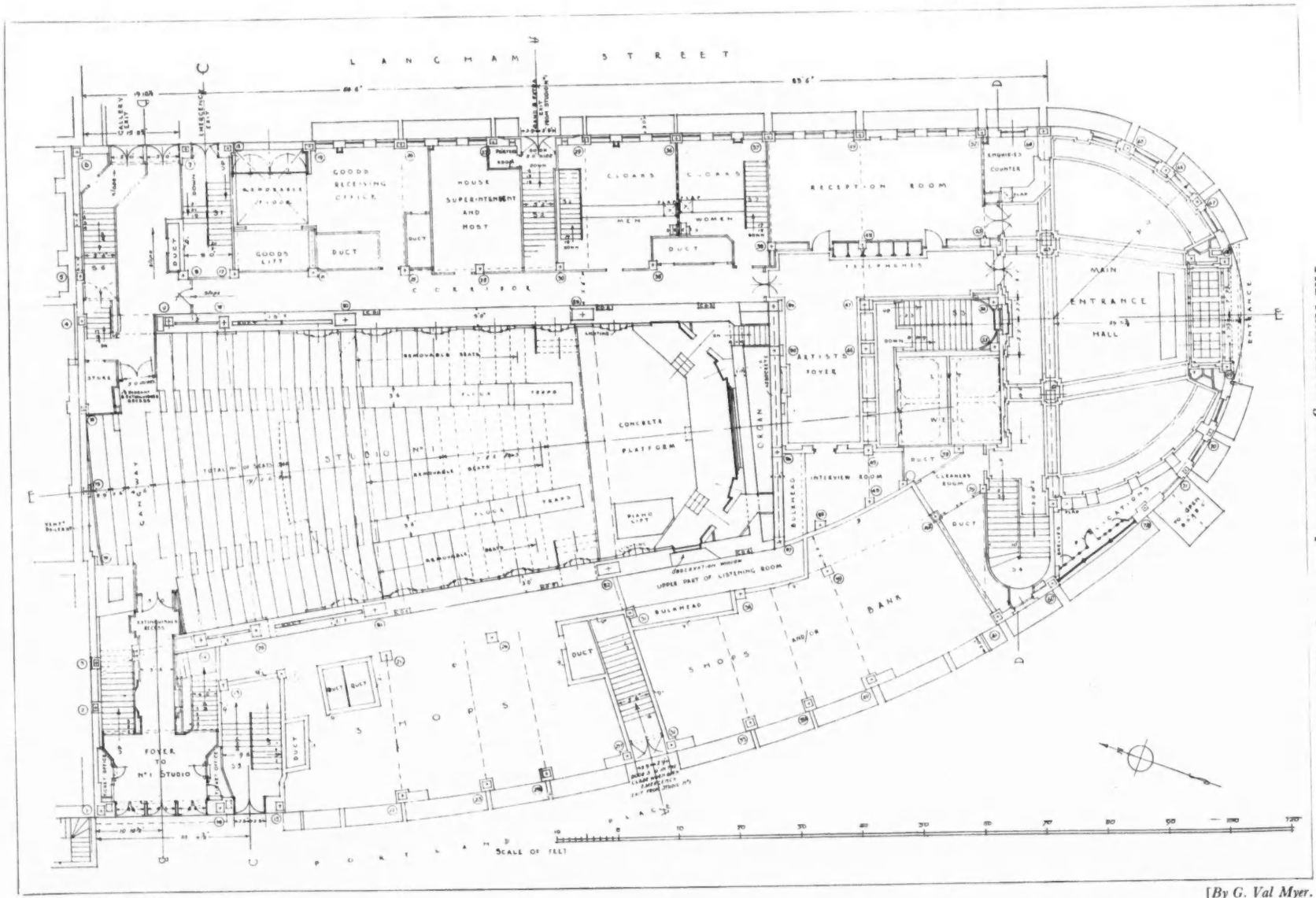
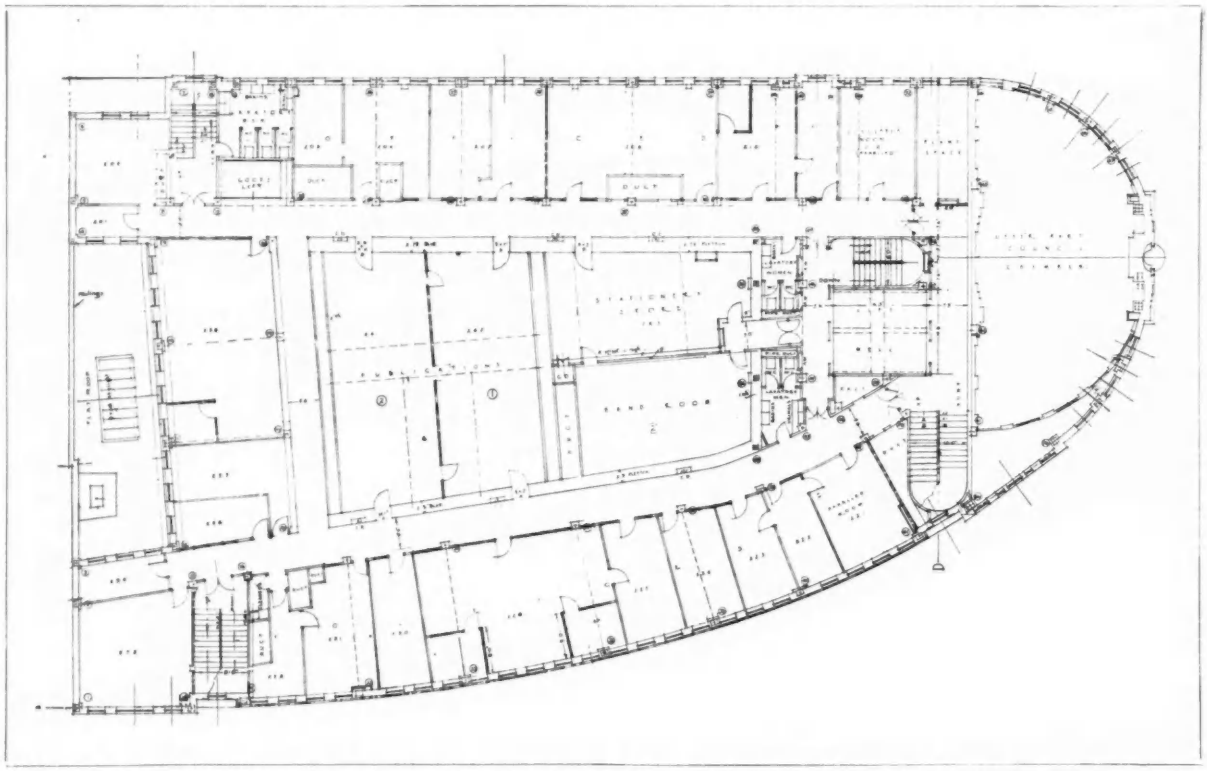
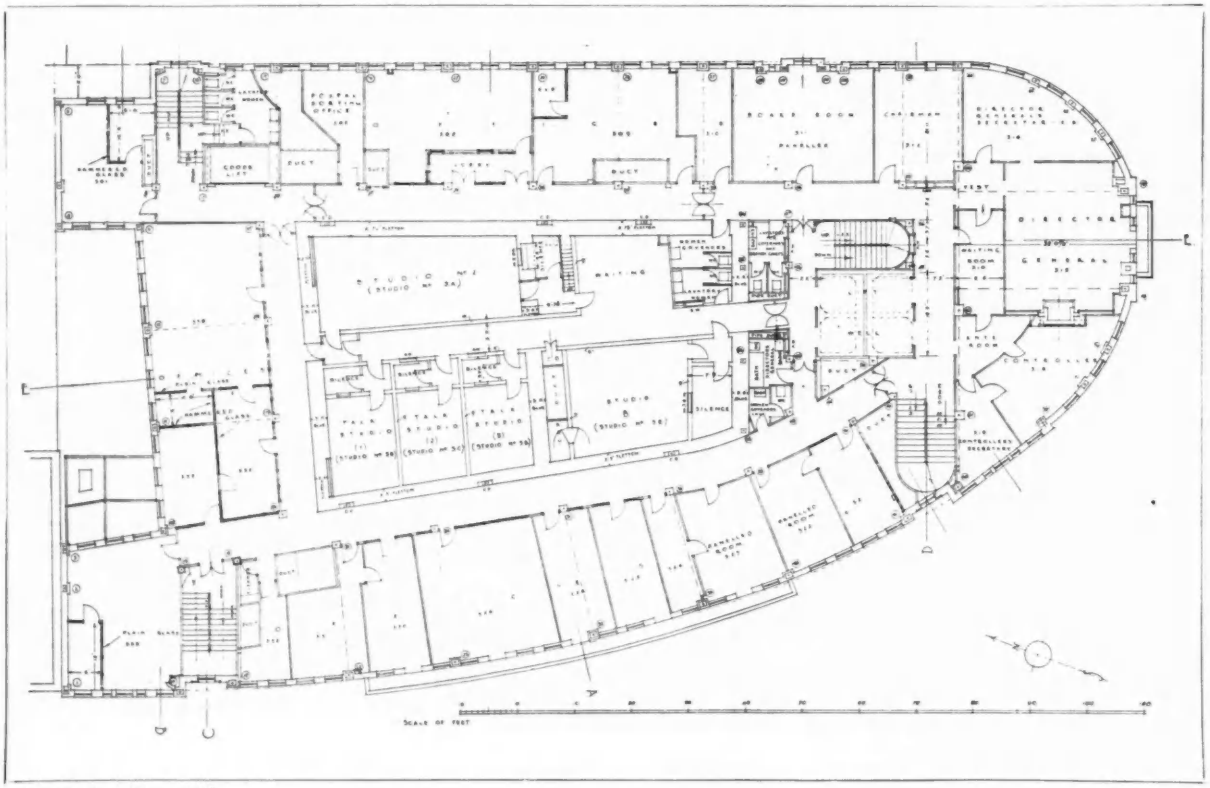


Broadcasting House, W.] [*By G. Val Myer.*

Ground-floor plan. The main entrance is at the southern apex of the site. In the entrance hall are a staircase and two lifts to serve the administration offices; in the same shaft are two more lifts for the artists and studio staff, entered from a foyer within the tower itself and approached by swing doors from the hall. A separate staircase is also provided.

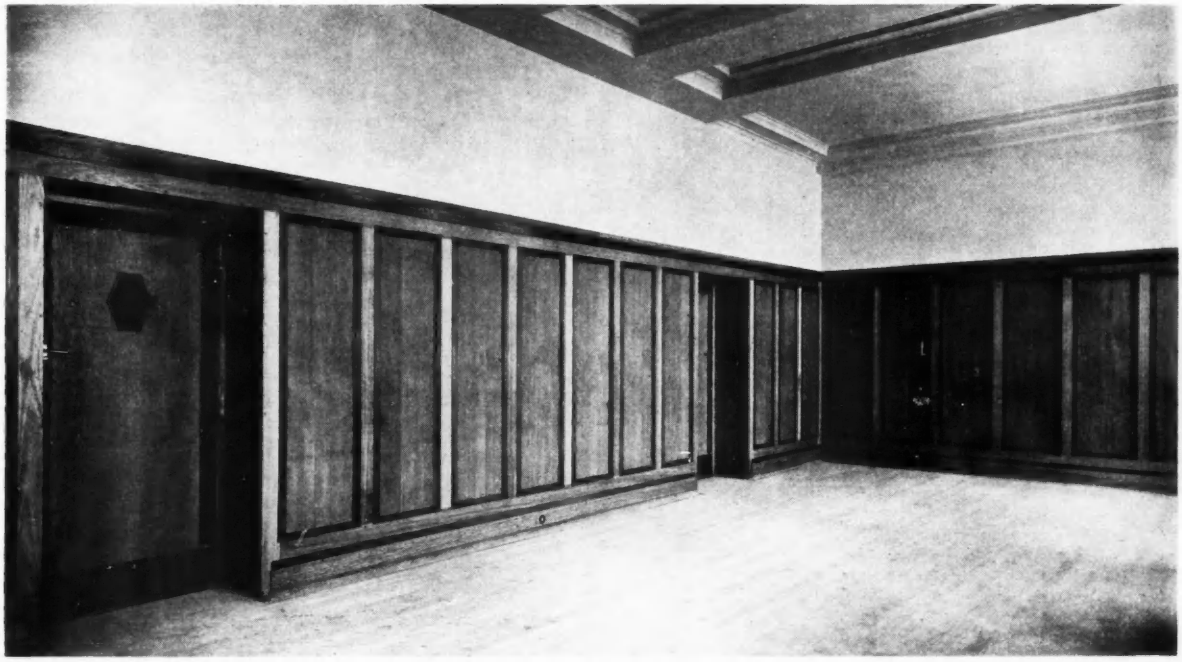


The second floor contains no studios whatsoever. It forms a "buffer" section between the studios on the floor above and the concert hall below, and will house the offices of the B.B.C. Publications Department.

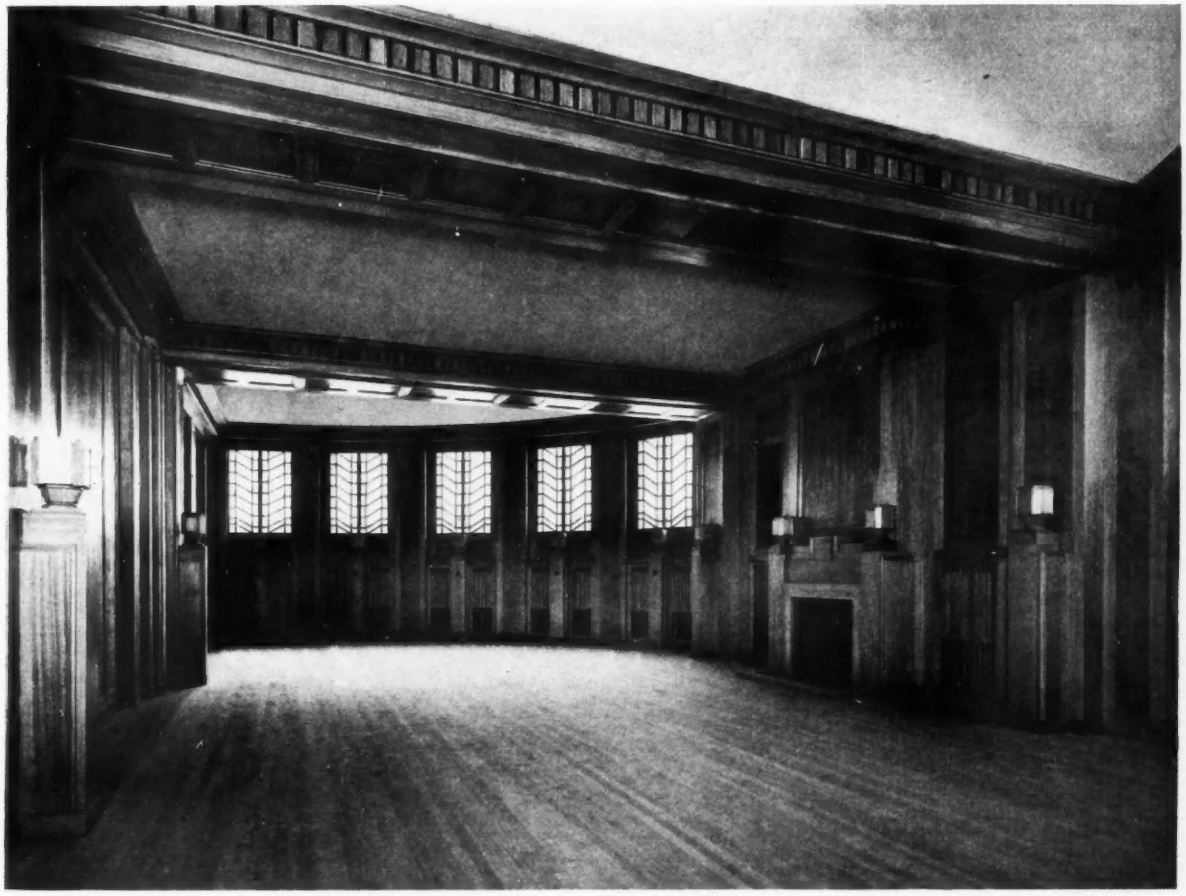


Broadcasting House, W.]

The third floor of the tower is devoted to studios. Two of them (3A and 3E) are two stories high. The first will be used for the children's hour and chamber music, and the second for the morning and Sunday services and the Epilogue.



The reception room is entered by swing doors from the main hall, and will be used by the more important " stars " whilst awaiting their turn to broadcast. The doors lead to the artists' foyer and lifts running to the studio floors.



[*By G. Val Myer.*

The council chamber on the second floor takes the form of a half-circle. The walls are lined in Tasmanian oak and all round are open wooden urns, which conceal the means of illumination. Novel methods of ventilating and heating are installed.

water away from the northern heights of London. The erection of the building with its enormous weight above this sewer was a risky project. The job, however, was accomplished by encasing the sewer in a reinforced concrete bridge. The sewer was uncovered and re-covered inch by inch in case the removal of pressure outside it, counteracting the pressure of water from within, might lead to bursting. A still further difficulty had to be overcome in this case owing to the treacherous water-logged subsoil.

The foundations and retaining walls are enclosed in a thick layer of asphalt. Within this asphalt at the bottom is a foundation of concrete, embedding enormous grillages of steel which distribute the weight of the superstructure over the site. Below the foundation, an artesian well has been sunk so that the building may have an independent supply of water.

The ventilation of the studios, which contain no windows, presented a unique problem. To ensure inter-studio silence elaborate precautions were taken to prevent sound being transmitted through the extensive range of ventilating ducting, over one hundred tons of which are installed. All the services —lighting, water supply, drainage, sanitary fittings, internal communication by telephones and bells, signal lights to studios, lifts, etc.—are of the most modern and efficient types.

The building has been designed by Lt.-Col. G. Val Myer, F.R.I.B.A. (of Val Myer and Watson Hart), in association with Mr. M. T. Tudsbery, A.M.I.C.E., civil engineer to the B.B.C.

Broadcasting House, W [*By G. Val Myer.*

A view taken from the steps of All Souls' Church, Langham Place. The architect's working drawing and a photograph of the main entrance are reproduced on one of the special supplements accompanying the present issue.

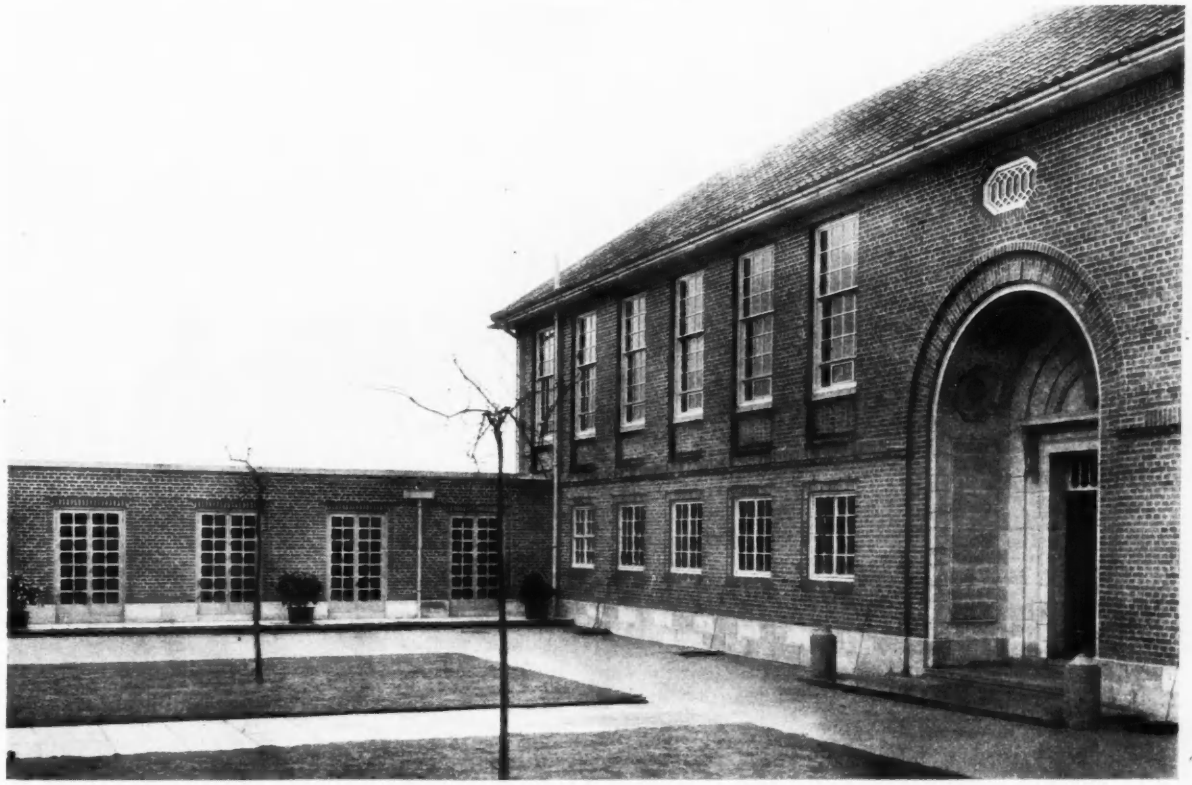
NEW ELEMENTARY SCHOOL AT BIRKDALE, SOUTHPORT

DESIGNED BY GRAYSON AND BARNISH

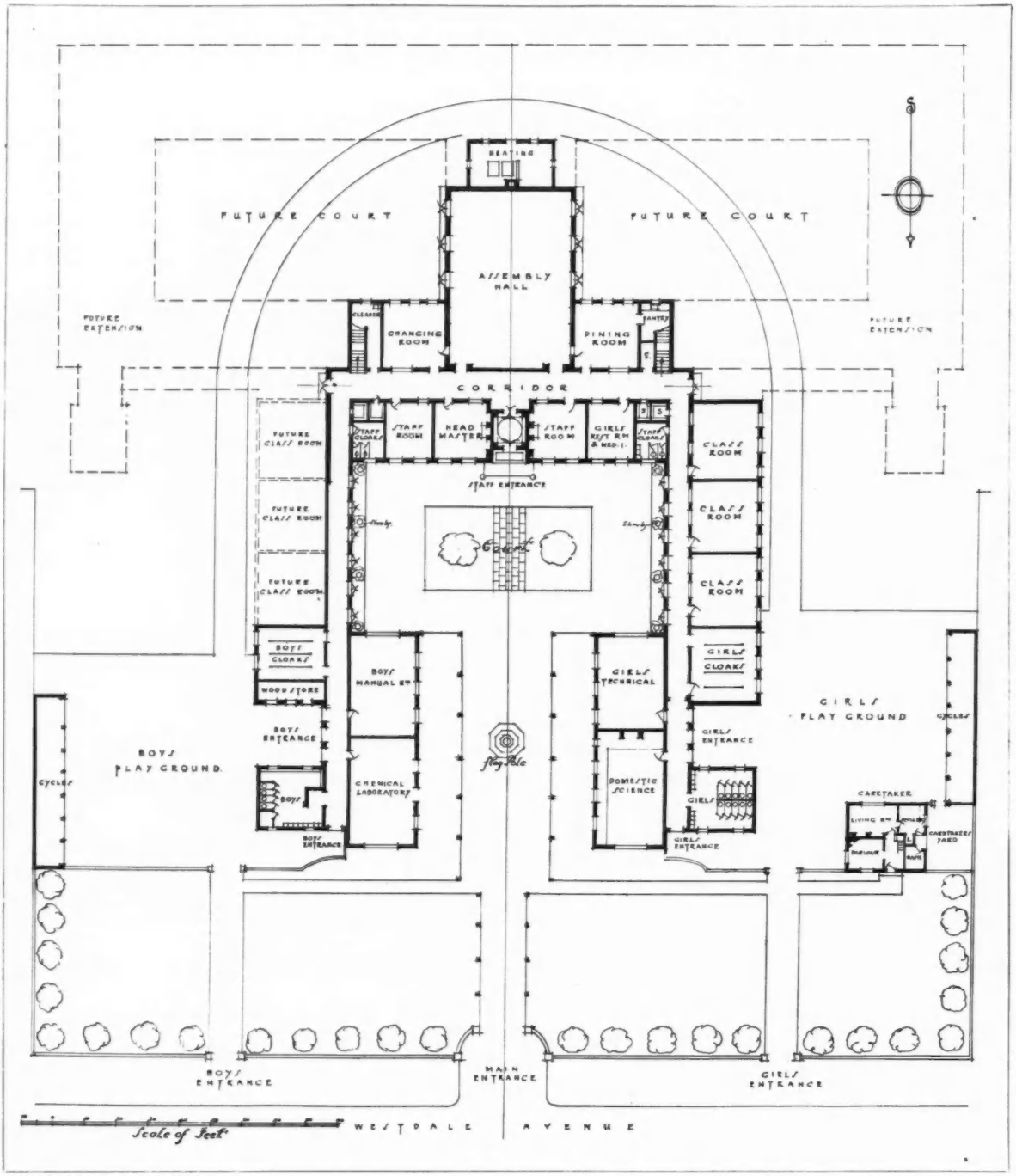
General view of the school buildings already erected, as seen from the main entrance in Westdale Avenue.

THE designs for this senior elementary school won a competition assessed by Professor S. D. Adshead in 1928. The competition system has here justified itself to the full; the school authorities could scarcely have obtained a better or as good a design by any other method. Also, in this instance, nobody would venture to impugn the justice of the assessor's award, for the winning design was far and away the best submitted. Moreover, the circumstances connected with the competition were especially happy, inasmuch as ample ground was available on a flat site and the architects were able to tackle the problem presented under ideal conditions. Nevertheless, considerable skill was required to utilize the site to the best advantage and to satisfy a number of complex practical and æsthetic requirements.

This term "æsthetic" is emphasized because the time has long since passed when school buildings had no other merits than the strictly utilitarian. The very fact that the authorities organized



In the central court. The two-story portion, with entrance door on the right, provides staff rooms on the ground floor and lecture-rooms above. The wall on the left flanks a corridor.



Birkdale Elementary School, Lancs.]

Ground plan, showing the first part of the scheme, just completed, and the layout of future extensions. Harmonious inter-relationship is secured, while what is already erected is an architectural entity.

a competition is in itself clear proof that they wanted not only a convenient and economical building but also one with a certain amount of dignity and even beauty.

While on restricted sites it is necessary to plan a school on two or more floors, it has now come to be recognized that the ideal arrangement, wherever possible, is to provide all the accommodation on the ground floor. It is a moot point whether such an arrangement is slightly more costly except where the cost of land is high. From the æsthetic point of view there is much to be said for arrangement on the quadrangular system, for such planning has a good tradition behind it and has in the past lent itself to most distinguished architectural treatment. A very low building covering a large area is, however, apt to be somewhat lacking in architectural dignity unless at one part of it it is permissible to raise the height in order to obtain a centre of interest. Sometimes this necessary focal point is provided in the assembly hall, but it can easily be imagined that unless this latter is made taller than it actually need be, it may fail to perform this artistic function. In the case of the Birkdale school the architects have quite obviously recognized the nature

[*By Grayson and Barnish.*

The main (staff) entrance. The bricks are hand-made, and of soft and subtle colours. The coat-of-arms, like the flagstaff base (see view on page 401), was carved by Tyson Smith.

of this problem, for opposite the entrance to the forecourt they have planned four lecture-rooms on the first floor, and although the floor area of this elevated portion cannot amount to a twentieth part of the whole, it yet suffices very greatly to increase the architectural importance of the group; moreover, it forms a necessary connecting link between this first quadrangle and the assembly hall behind it.

Another special merit in the design is that, although in the first instance only part of the group has been built, it is an artistic whole in itself. The completed scheme, which will include boys' and girls' courts, comprises a symmetrical composition with which the first portion to be built will be harmoniously associated.

The elevations show that a modern school building can be hygienically arranged without any sacrifice of architectural quality. Here, ample window space is provided and yet there is sufficient wallage to give the requisite appearance of solidity. The detail, in the English Renaissance convention, is scholarly. The bricks are hand-made of various delightfully soft and subtle colours. The roofs are covered with pantiles of a dun colour, with a few reds. A. T. E.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xviii

PROVINCIAL PRACTICE

BY KARSHISH

(H. B. CRESWELL)

THE account I have given of St. Michael's Church Bazaar will appear cynical—that is, contemptuous of human emotions and motives. Much that now follows will unavoidably appear coloured by a similar cynicism; yet I am no cynic. I have, in fact, so profound a faith in human nature, that my veneration for the great spirits that have lived in the past and for those that are now living, and my joy in the good men and true who are among my friends and acquaintances, would alone reconcile me to living in the world if nothing else did. To me, the hardest thing in life is its loneliness; but to recognize one's own dim aspirations in the work and in the lives of great thinkers, poets and artists, and to be warmed by their rays, is never to be lonely.

It must also be borne in mind that a man cannot assess himself, lacking a gauge and without a background to measure against; and that this picture of myself, observed from a distance of thirty years and from the vantage point of experience, does not represent any states of mind or feeling that then possessed me.

Thus, when I found myself launched in private practice in Nollingborough, I accepted the snobbery and mean rivalries of a small provincial town with perfect good faith; supposed mine to be the common lot of men; and imagined that the consequent strain and circumspection imposed on me were normal experiences. In my struggle for life I accordingly identified myself with the game everyone else was playing, and with complete simplicity, competed in machinations of which I only knew the significance after I had, in the course of years, got on terms with myself and learnt what was what. I was merely a simple-minded young man who, finding himself in Rome, did as Rome did, and for the excellent reason that, as an architect fighting for life, I had no knowledge of any place than Rome. If my picture of a small provincial town appears cynical, it is because a small provincial town is no more than a large village; because "God made the cities and the devil made the villages"; because Nollingborough was probably specially favoured by satanic ministrations; and because it is my purpose to tell of life as it is—and as everyone knows it to be; and not as it is supposed to be—and everyone pretends that it is.

Nollingborough was, of course, similar to every small provincial town of the same class, except that it had for its Rector the Venerable Archdeacon Brythwater. He was the central luminary about which the snobbish aspirations of Nollingborough and neighbourhood circulated in various orbits, far or near.

No one who did not arrestingly satisfy the conventional ideas of a Gentleman could have held sway as Brythwater did. He was connected with some of the oldest families in the country, so that he had pecking power over everyone; held a rich living and possessed a large private fortune; was good-looking and always exquisitely tailored; his carriage and pair was a joy to behold, as was the phaeton he sported. He was a childless widower of under forty, whose extreme eligibility, like that of Queen Elizabeth, served him well, as all his other worldly advantages did. The "Guide to Nollingborough", which gave tables of the numbers of pigs sold yearly in the market, recorded that he was the grandson of a Duke and a godchild of the Queen of the Netherlands; and the parish magazine gave particulars from time to time of the great houses at which he stayed and of the State functions he attended, and these bits of exciting news were duly recorded in the local weekly paper. He had a distinguished house party for the Hunt ball; held a wonderful garden party every summer; gave numerous dinner parties, and a conversazione in the Town Hall in the winter, at which his sister, the Countess of Verehaven, acted as hostess, and which everyone, from far and near, attended.

The Rectory circle—if I may so term it—was thus a kind of viceregal court to which everyone, who dared hope, aspired to have in some degree the entrée; and the rank attained by each, according to the nearness of their approach to the fount, established their social standing in the place, and settled whom each might snub and by whom be snubbed.

I never perfectly understood the subtleties of the game until I married, for my wife was a perfect mistress of it—as I shall have to tell; I merely knew it as a condition of discomfort. I found myself repulsed by those who were of my own kidney and to whom I was naturally drawn, but who felt their social position forbade them from discovering whether I was worth knowing or not; and I found myself besieged by people with whom I was entirely out of sympathy; who bored and embarrassed me; and who had no other use for my acquaintance than to wear me like a feather in their caps, or even use me as foothold for springing on to the back of some other more desirable acquaintance who would in turn serve as a stepping-stone to greater heights again.

There were, however, realms both below and above aspiration to the Rectory circle, each of which, although I was scarcely conscious of it, poisoned life. The first was the Town proper—the small professional men and tradespeople, and the whole body of Nonconformists who were beyond the fringe of Nollingborough society; and the other was the hunting people, who, being largely stockbrokers or manufacturers who often had also houses in London and who, during nine months of the year, lived in the neighbourhood and went up to town three or four days a week, aspired to intimacy with the few choice county families and small squires, and so engaged in the same fatuous rivalries as we did in the Town. The Rectory was also a rallying point for the hunting fraternity—many of whom did not hunt, but only pretended to hunt, and never wore pink except at the Hunt ball, because, in the field, it would draw attention to their "crooked going"—for Brythwater was on terms of intimacy with the great of the land, and everyone who had the chance was a guest at his dinner-parties and honoured the social functions with which he celebrated himself.

Until I married I saw nothing of the hunting people and the county families, except in my professional capacity and as a young man in request at lawn-tennis parties; I was never, as a bachelor, asked to dinner or to dances at their houses, though once or twice I took part in private theatricals among them; in fact, looking back, and until my marriage brought a complete change, my social activities consisted in being entertained at the houses of people with whom I was ill at ease, had nothing in common with and cared nothing about; and in *not* being included among guests at the houses of people to whom I was drawn for exactly the opposite reasons.

As for the Town—the socially submerged—whom I knew only because I had an office in the place and was professionally rooted there, I gained nothing but discomfort. I have already said that in earlier years the enmity of Billington, the Surveyor whom I had displaced at Albion Works, and who

was accepted as the leading architect in the town, was dreadful. I had to meet him on one or two occasions and the avowed hostility of his manner—he was a much older man than I—was shocking in its intensity. When I passed him in the streets, as I frequently did, it was with the stiff-legged tension of bristling dogs set at a trigger to spring at each other's throats.

The Surveyor to the Urban District Council was, as I have said, violently hostile to me; he was offensive in his manner, and apparently desired an open quarrel. I lived this down in about eighteen months, and won a good-humoured toleration from him; but when I set up an office, eighteen months later, again, he came up to me in the street and said, almost savagely: "I see we have to thank the Eureka Plough Company for bringing another architect into the town." This, I do not doubt, was the general ground of resentment of me; for this man was only an imported official: he did not belong to the place and could only have been expressing the jealousy of those with whom his life was identified. This unfortunate man, who was only about forty-five, had a paralytic stroke which, it was known, had ended his working life. I went to see him in his home and found him flushed and tremulous; but even at that moment, when he knew I had come to let him feel that I, who had never made ground for quarrel with him, bore no ill-feeling against him for his provocations, he kept me at arm's length. He told me he was "quite well"; was trivial and insincere and faintly ironical; and entirely refused any sign of good feeling or admission of significance in the occasion.

As regards Billington, I refrained from making trouble for him, as I might have done when taking charge of work which he, as architect, had lately relinquished; and avoided obstructing him at all times. After some years I was given to understand that he had no ill-feeling towards me, although I was, at about the same time, considerately sent a message from a sham great lady of the neighbourhood: "You may tell your friend Mr. Whistlow that he cannot hope to practice as an architect while Mr. Billington is here." I never, however, accosted Billington. We could not meet on equal terms, either socially or professionally, and to allow intimacy was to risk quarrelling.

For much the same reason I knew none of the three other "architects"—one of whom had been a foreman plumber—who practised in the place chiefly as surveyors and land agents; for the town was a hotbed of petty intrigue and wirepulling and quarrelling, and I avoided all concern with its affairs, and never built anything in the place except a small church and houses for some of my acquaintances.

In all this I acted by instinct; I did not know where I was, so to speak, and could scarcely find reasons for what I did, and certainly knew nothing of my motives. My gradual emergence into established practice was accomplished by following my instincts; and although I might write interminably on the subject, I have said enough to show the influences to which those instincts reacted.

It was instinct that led me to rent an office in an obscure backwater of the town, and to avoid the publicity which other professional men in the place sought. I had a repugnance to appearing in rivalry with my brother architects; I was, in fact, ashamed to be an architect, and ashamed also to be associated with the place in any connection. In thus cutting myself off, and going my own way and thinking my own thoughts, and knowing little or nothing of what occupied the accretions of spinal marrow that served my fellow-townsmen for brains, it seems to me I did well; for I could not have engaged in that field without in some degree sharing its interests and taking a part in its politics, and in doing so I should have surrendered something of my native proclivities.

The office I rented for twenty pounds a year was a small detached building which had been put up at the bottom of a doctor's garden to serve as a dispensary in days when doctors in the provinces supplied medicines to their patients and the "doctor's boy" was a familiar figure. It provided me with a general office and private and drawing offices, and gave on to a *cul-de-sac* opening off a by-street, so that I was as remote and secluded as I could desire. As I had no commissions, and no paid employment, except for the Eureka Plough Company, my only need, in the way of staff, was for a boy to keep the office open and answer the telephone. Binger, the person I engaged for these duties, was recommended by an acquaintance in whose house he had been employed under the butler. My acquaintance was interested in the boy, who had expressed willingness to become an architect—which, considering the standard of accomplishment understood by the term in Nollingborough, and the fact that Binger was sixteen, was not so wild an ambition as might appear.

Binger could not write or spell or figure except as a child of seven might, so that though I felt some responsibility for his future, it was difficult to know how to help him, for he refused to realize his deficiencies, and the tasks I set him—for his own advantage—were neglected, for I was much out of the office.

I used to bring sandwiches with me, and sometimes lunch at the office, and once, being out of beer, I asked Binger to get me a bottle. He took the money, but before he had shut the door, returned to inform me he was a teetotaller, and that he would be soiled by contact with the bottle. "It is conscientious, Sir," he explained. I was shocked that a need of mine should pollute the soul of this young creature. I told him I was sorry I had been so thoughtless; yet it was upon this very point of disparity of conscience that I had to part from Binger, whose destiny proved to be a higher one than that of any architect.

I noticed that sometimes, when I came into his office, Binger made hurried and furtive motions of pushing something out of sight into his pocket or under his papers. The thing became so flagrant in deceitful purpose that I one day said: "What is it you hide from me whenever I come into the room?"

I do not know what answer I expected, but it was certainly not the one I got:

"Hymns, Sir."

"*Hymns!*"

"Yes, Sir. I got to learn 'em," and he pulled out a much-thumbed booklet and explained that he was going to be a lay preacher—I think that was the term—and mentioned the name of a leading Nonconformist in the town who was sponsoring him. I told Binger that it was no good his engaging at my office if his heart was not in his work; that he knew I wished to help him, and that he ought to confide in me and not deceive me. Binger overflowed with protestations of good intentions and, clasping his thick red hands, hoped I would overlook it, just this once, Sir, and seemed to consider his offence a good deal more rank than I did.

The only effect of this interview was to make Binger more secretive and more fawning and sycophantic than before, which increased his repulsiveness, for it spoke only of deceit. My final severance with him must have taxed the poor lad's capacity for forgiveness severely, for I wrecked love's young dream.

Next to my office building was the yard gate of the adjoining house, and once, when I turned the corner, my eye was caught by a female figure escaping like a rat to sanctuary behind this gate. Nothing but the consternation of the flying skirts would have warned me; but when I found Binger absorbed in an ideal of concentration and oozing merit so furiously that the office flowed with it, I knew that he was on a friendly footing with the scullery maid next door, and that their friendship was of a kind of which he had cause to be ashamed. A week or two later, as I entered my door, this same little bit of a girl bolted out past

me like a frightened rabbit, and doubled in through the adjoining gates; and a violent movement and slapping of papers in his office told me of Binger's frantic effort to establish a pose of sedulous dutifulness before I came in. Poor Binger clasped his hands, shivered, and protested—"overlook it just this once, Sir, it shall not occur again"; but I saw no chance of helping him to better ways of thinking, and the preacher accordingly went forth to preach.

The first private commission I had after I set up at 1 Towler Street, Nollingborough, with a brass plate bearing also the name of Philip Garston and our Charles Street address, was for a London client; and I should not mention it except that this was the first time I ever acted professionally for a lady; the first time I ever had a member of the aristocracy for a client; and the first of the two occasions in my life when I have fallen out with anyone who has employed me. Both those catastrophes, distressing as they were, give me no grounds for self-reproach, for they were due to my upholding the rights of the builder as against the interests of my client, and, unless I had borne unjustly on honest and deserving men, were inevitable.

Lady Pendragon was a Viscountess, a widow with marriageable (very) daughters, and a house in Belgrave Square. I had met her at my friend, Mrs. Torrington's, and it was to that friend's good offices that I owed the commission to carry out minor alterations and redecoration of reception rooms at Lady Pendragon's house. Lady Pendragon had a hurried, restless, aloof manner, but she was, as I had reasons to know, a good-hearted woman with many close friends; she was, however, circumscribed by the limitations of her class, and her idea of the social order was probably very much what was general before the Reform Bill, or even before the French Revolution. She was perfectly frank and agreeable in her manner to me, but only, I thought, as she would have been to her piano tuner or hairdresser; for I was always kept at arm's length, and no trivial interchanges or other the least trespasses on intimacy were ever permissible.

My estimate of the cost of the work was about £800—as values then were. I was told that this figure was satisfactory, so that when I secured from a small but good builder known to Garston a tender for seventy pounds less, I supposed that I should be directed to accept it. In this, however, I had not reckoned with the highly refined reasoning processes of the female mind. I was told, "Bunter's estimate is far too much; I could not dream of paying such a sum." Things were arranged by the usual process of reconciling the client to paying a little more and getting a little less than was originally hoped, and the work was put in hand; but I received continual letters from the builder saying that her Ladyship wanted one thing or another, and asking for my authority for orders she had given as variations or extras. I could only write to my client pointing out the obvious misunderstandings and oversights implied in her orders; or accepting her instructions and recording that an extra was involved. This brought me letters which only added confusion to the muddle and left me at a loss to understand what the lady's wishes could be.

Interviews scarcely served to clear the ground, for though I got precise instructions which I recorded in confirmatory letters, I was aware that Lady Pendragon herself did not realize the bearing of one matter on another, for she could hold only one idea in her head at a time and that only briefly—her mind, in fact, worked with the violent waywardness of a newly-hatched bluebottle on a sunny day.

At last, the job was finished—and well finished; but still there were other things that "the Bunter man has got to do." Bunter was notified of these other things by scraps of paper—stray half-sheets torn from old letters—in her Ladyship's handwriting: "Mr. Bunter, Lady Pendragon wants the cupboard made to open inside;" or, "Mr. Bunter, the stairs must be all white instead of at sides." The end of it was that I had to write plainly to the Right Hon. the Viscountess and tell her that the builder's liabilities were limited by the contract; that I, as her architect, was the person named in the contract to decide whether the builder had properly carried out his contract or not; and that I held that Mr. Bunter had done so and had so informed him. I sent Bunter a copy of this letter and advised him not to take notice of any further demands he might receive. This action on my part put me for ever in the black books of Lady Pendragon, and earned me such a bad name as an architect with my friend Mrs. Torrington that she never again, as she might readily have done, introduced my name to the favourable consideration of acquaintances who were in need of an architect.

However, I had Bunter's gratitude, which he marked in quite a touching way a couple of years later. The builder's account and my own were promptly paid without question by her Ladyship's agents, in a neat gesture of washing hands of me and all connected with me; but before I had to recognize and bewail my misfortune, my mind was fully taken up by activities that gave me no heart for regrets of any kind.

NEXT WEEK: XIX—FORGING AHEAD

The previous instalments appeared as follows:

May 27.	i: I am Articled.
June 3.	ii: Episodes of Pupilage.
June 10.	iii: Episodes of Growth.
June 17.	iv: My First Job: The Sewer.
June 24.	v: My First Job: The "Pipes."
July 1.	vi: I Turn Clerk of Works.
July 8.	vii: Bradshaw & Son: Builders.
July 15.	viii: Joe Richards: Foreman.
July 22.	ix: Trials of a Clerk of Works.
July 29.	x: A New Venture.
Aug. 5.	xi: The Resident Architect.
Aug. 12.	xii: An Architect's Early Gruel.
Aug. 19.	xiii; An Uphill Fight.
Aug. 26.	xiv: A Disaster.
Sept. 2.	xv: The Law's Majesty.
Sept. 9.	xvi: A Failure and a Success.
Sept. 16.	xvii: Private Practice at Last.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Demolished Houses

MR. CHAMBERLAIN, the Minister of Health, stated that up to June 30 last eighty-seven unfit houses in clearance areas and thirteen unfit houses in improvement areas had been demolished. Up to August 31 last 278 houses had been completed under the Housing Act, 1930.

The Statue of Lord Haig

Major Cohen asked the Under Secretary of State for the Home Department, as representing the First Commissioner of Works, whether he would reconsider the decision arrived at by his predecessor regarding the statue of the late Lord Haig, seeing that the statue in question had been publicly condemned by Lady Haig, by the British Legion, and by public opinion generally.

Major Oliver Stanley said that the sculptor selected to execute the memorial statue was commissioned to carry out the work seven months ago, and this was now in progress. In those circumstances the First Commissioner of Works was unable to cancel the appointment of the sculptor.

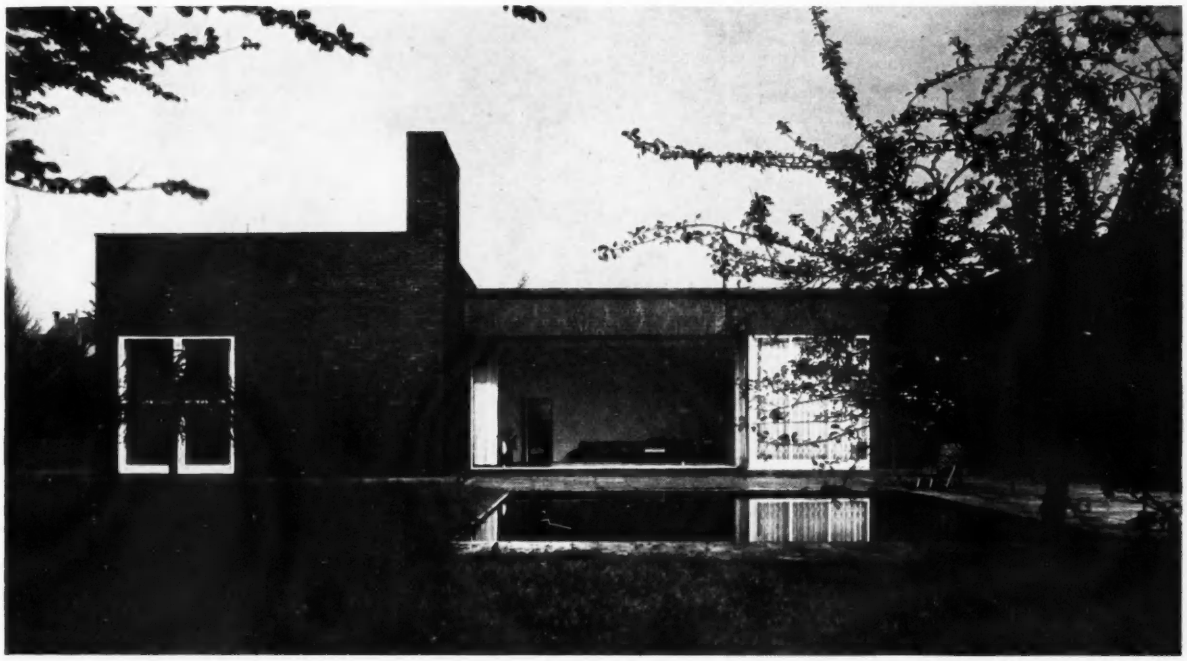
Progress of the Bills, etc.

On Thursday of last week the Public Works Loans Bill was read in the House of Lords for the first time, and on the same day the Finance (No. 2) and Housing (Financial Provisions) Act (1924) Amendment Bills were also read in the House of Commons for the first time.

On the previous day the Road Fund (Advances) resolution was agreed to in Committee.

A VILLA IN BRICK AT INNSBRUCK, AUSTRIA

DESIGNED BY LOIS WELZENBACHER



The garden room groups well with the swimming pool, and the brickwork of this and other elevations has interesting details. All the courses are of stretchers; over the large white window behind the tree these are laid vertically to give the effect of a lintol.

THIS villa is typical of the work of Welzenbacher, who, though not widely known in this country, has built many charming houses in Austria. Favouring brickwork generally in preference to concrete, the architect has here contrived to use his bricks in an amusing manner, and has in several places left them unplastered in portions of the internal walls, where, with deeply-raked joints, they contrast with the plain wall surfaces and provide a pleasing serrated finish at the angles.

The external walls are raked less deeply, and the bricks are used decoratively, all courses being of stretchers running either horizontally or vertically to produce patterns. Over the large window facing the swimming pool, courses running vertically are used to give a satisfactory lintol effect.

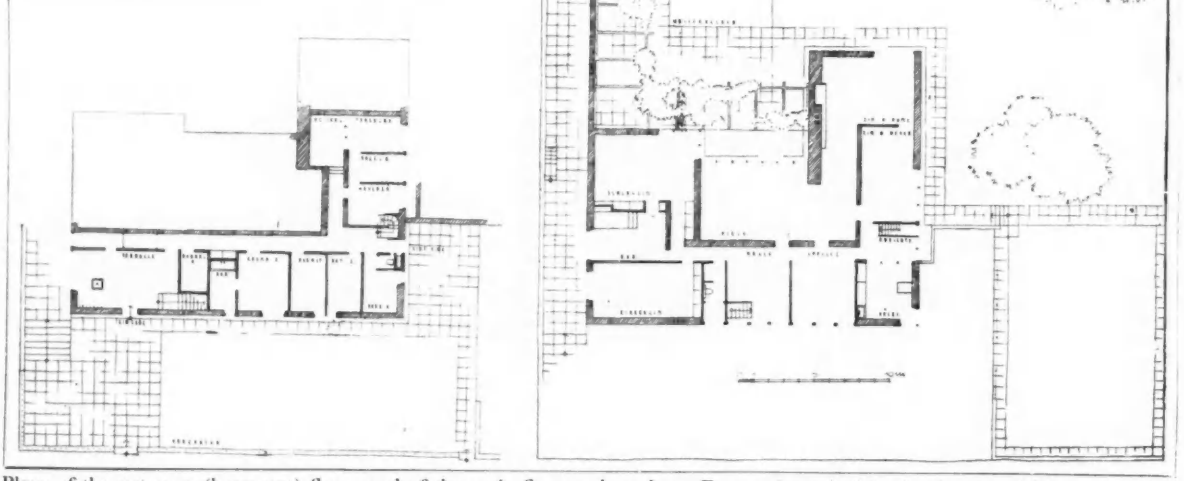
This view of the main entrance shows still more clearly the manner in which the brickwork is formed into patterning. Within doors is a large hall at the lower level of the sloping site.

The plan is dictated by a slope in the site from the entrance front, upwards towards the garden, which the architect has used with skill to suit his particular purpose. Servants' quarters, services and stores are arranged at the lower level, over only a part of the site, and above, on the main floor, are planned the living-rooms, dining-room and kitchen, and bedrooms, etc. The main entrance opens into a large hall at the lower level, from which the principal stair ascends to the lounge hall on the main floor.

The free planning which lends so much charm to the modern Continental interior, and enables every inch of space to be used to advantage, has given here a spaciousness connected as a rule with a larger type of house. The proportion of the individual rooms has been carefully studied, and is aided by

The interior of the garden room, looking out across one corner of the swimming pool. The architect has chosen and designed all the furnishings. Here is seen a large rush mat, coarsely woven; the corded upholstery is in brilliant colours; the flooring, as throughout the house, is of polished wood blocks laid with alternate graining.

the varying ceiling heights. The furniture has been designed and skilfully placed by the architect to form part of the general scheme (see the supplement with this issue, which gives details of a mirror, a writing-table and the fitted kitchen). F. Y.



Plans of the entrance (basement) floor; and of the main floor and garden. From a large hall in the former, which is otherwise devoted to dark-room, guest room and bathroom, *en suite*, and service and heating apartments, a stair leads to a spacious upper hall with dining-room and kitchen adjacent, to the right, and nursery, bath and bedroom to the left. There are also a ladies' room (boudoir) and men's room (library). All these are clustered about the central garden room.

LETTERS FROM READERS

Housing and National Economy

SIR,—Will you permit me to make a few observations on Mr. McKellen's letter on the housing situation which appeared in your issue for September 16?

For years past housing administrators have unanimously agreed that Britain's gigantic post-war housing problem can only be solved by continuous national effort over a long period of years. This fact was recognized by Parliament in 1924, when the Housing (Financial Provisions) Act, 1924, was passed, with the consent of all parties, during the late Mr. John Wheatley's term of office as Minister of Health. The Bill was described by Mr. Wheatley as "a treaty with the local authorities, a treaty with the building industry, and a charter for the tenants," and the Government circular (No. 520) explaining its provisions stated that the object of the Act was :

> To establish continuity in dealing with the housing problem, and by the adoption of a long and continuous programme of building to ensure such a development of all the resources of the building industry as will guarantee the production of houses on a scale sufficient to overcome the present serious shortage of houses.

Mr. Wheatley was able to convince the House of Commons that stability of output of houses for letting could only be obtained by guaranteeing an adequate Exchequer subvention to local authorities over a term of fifteen years from 1924. The houses were to be of good standard, with an average density of twelve to the acre in urban areas (eight in agricultural parishes), and were to be let generally at appropriate normal rents.

Whatever the present state of our national finances may be, it cannot be denied that there is still today in many parts of the country a serious shortage of dwellings for the lower-paid wage-earners. Ample proof of this fact will be found in the latest annual reports of the medical officers of health, who point out in vehement language the deplorable effect of insanitary housing conditions upon the health of tens of thousands of working-class families. While, therefore, there may be grounds for stricter administration in the letting of State-assisted dwellings, it cannot be true economy to call for the curtailment of municipal housing programmes at this time. Nor must we forget, in our study of economics, that not fewer than 151,155 insured building trade operatives were recorded as unemployed in Great Britain at July 27, 1931.

It would appear that the National Federation of House Builders does not relish the competition of municipal housing. This is difficult to understand, inasmuch as private enterprise can still qualify for Exchequer assistance under the Act of 1924 at the rate of £7 10s. per house annually for forty years (equivalent to a grant of £134), provided that the special conditions as regards the rents to be charged, etc., are complied with.

It is even more difficult to appreciate Mr. McKellen's contention that unassisted private enterprise could overcome the present acute shortage of cheaply rented houses, especially as he himself addressed a letter to you on October 29, 1930, in which he stated :

> The National Federation of House Builders is convinced that it is impossible for private enterprise to build houses to rent to tenants without financial assistance by means of subsidies and loans on mortgage.

The Federation has also suggested, in its report to the late Government, that housing standards should be lowered—a proposal which the leaders of the National Housing Council will never accept.

JOHN G. MARTIN
(SECRETARY, NATIONAL HOUSING AND TOWN PLANNING COUNCIL)

Art and Industry

SIR,—I read with interest Mr. Noel Carrington's letter in a recent issue, calling attention to the formation of a Board of Trade Committee to deal with the relationship between Art and Industry. In that letter he advocated the planning of an International Exhibition for three or five years hence to exemplify "Design in Civilization."

As an architect turned schoolmaster, I am interested not only in the future of design for its own sake, and for the sake of its effects on character and happiness, but that boys who leave school—where they are no longer to be trained so much to administer estates and dependencies, as to be leaders in industry, commerce and all creative arts—and who enter industry, should find there scope for their talents and ideals.

I wish to show that the present depression is but one more reason why the Committee should be taken seriously by designers and industrialists alike.

Under the old system, which has contributed to the present depression, what has in fact been the relationship between industry and art ? It may be summed up in two phrases—"the ear to the ground" and "the boy in the office." The industrialist listened for the first faint footfall of fashion, and when he thought he heard it, a "boy in the office" with an untrained knack of design and a knowledge of the practical requirements embodied it. Typical results of this system on the product were the antique fashion which was expensive and inconvenient—like the Tudor villa; the modern convenience disguised as antique—like the electric stove basket-grate; or the inconvenient "modern" fitment which is modern for the sake of being "Modern."

The result on trade has been ever-changing fashions, hard to foretell, and a series of unaccountable slumps and booms. The public, not really satisfied with anything, moved discontentedly from one thing to another.

The system was thus unsatisfactory to both industrialist and customer, but it was hard to avoid, for it was the result of two causes. Designers were not practical enough, and industrialists had not perhaps enough faith in the power of a sound product to win through on its merits. Today the first of these causes exists no more. There is a more than adequate supply of practical and artistically-trained designers. It is the most important task of the Committee to show how these men can be fitted into key positions as designers in industry.

The effect on trade would be a growing confidence in the customer and a consequent steady and growing demand. Violent fluctuations of fashion would tend to disappear, for demand would be based on sound taste keeping pace with and appreciating each fresh improvement in design. But, it may be argued, "this taste does not exist." The reply is, that this public taste *is* forming, to judge only by public appreciation of good new buildings, "Underground" posters, Swedish products and the like ; and, secondly, that there are ways of stimulating its formation. It is here that Mr. Carrington's suggestion comes in.

By means of a carefully-planned series of individual Trade Exhibitions, judiciously advertised, industrialists might carry the public with them at each stage of their improvements. Further public interest might be stimulated, and public taste guided, by the appointment of panels of artists, architects and engineers, so constituted as really to command public confidence, which would award prizes in competitions in each class of product.

Meanwhile the series would be planned to lead up to a grand International Exhibition, where supreme competitions would be held.

It may be said, "this is no time for such ambitious schemes !" But what, in fact, is the lesson of the present crisis ? It is the result of an unfavourable trade balance. It has been our habit to export more than we imported and invest the surplus abroad, while neglecting the modernization of our plant and machinery, and the proper planning of our industrial areas. Is not the lesson, from every point of view, that we must cultivate our own garden ?

R. C. FISHER

THE SKETCH CLUB

THIRTY-EIGHTH SESSION

By Peter B. Dunham.] (Pencil: 11½″×9½″)

The Kniperspoort, Middelburg, Holland.

[*By Stanley Smith.* (Conté: 10¾″ × 9½″)

The Market Place, Lavenham, Suffolk.

By Alan Sherwin.] (Pencil, grained paper: 6¼″ × 8½″)

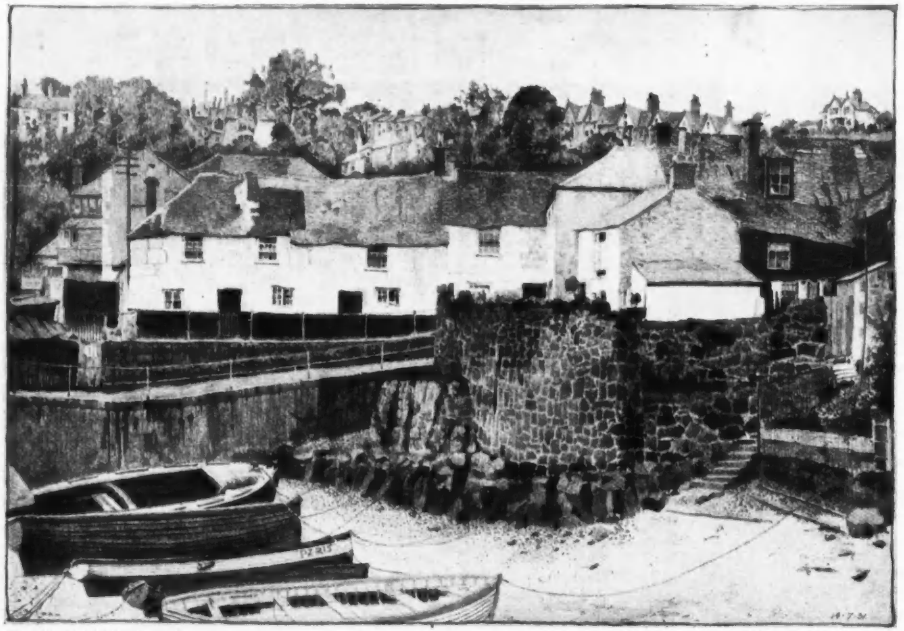
Prior Crauden's Chapel, Ely.

By Reginald C. Chapman.] (Water-colour: 8¾″ × 11½″)

Clovelly Church, Devon.

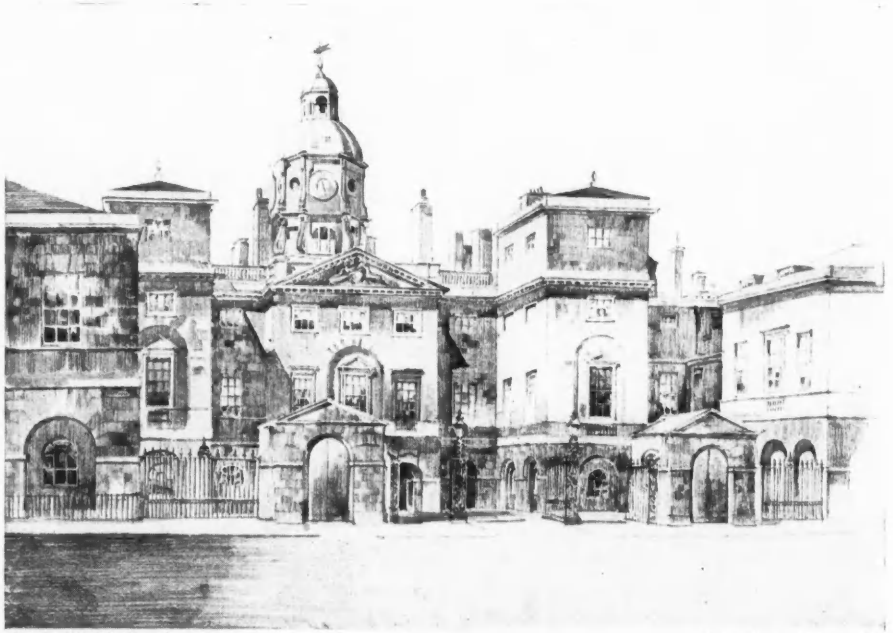
By Alan Sherwin.] (Pencil, grained paper: 6¼″ × 8½″)

The Close, Lichfield.



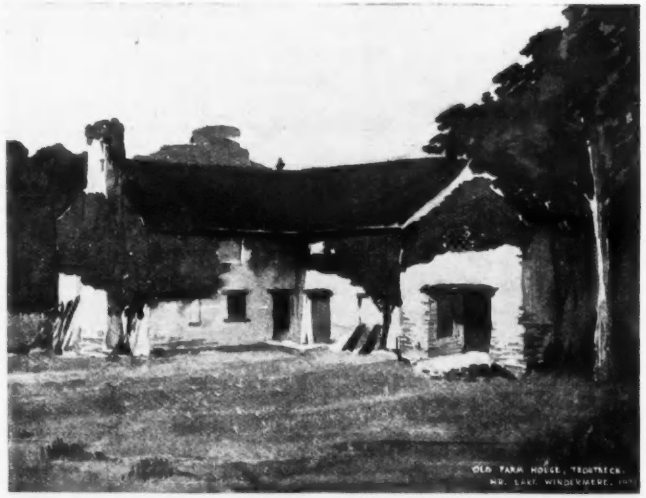
By W. E. Wilmshurst.] (Pencil : 10″ × 7″)

Newlyn, Cornwall.



By E. W. Winkless.] (Pencil : 20¾″ × 14¾″)

The Horse Guards, Whitehall.



By Ronald F. Reekie.] (Water-colour : 11″ × 8½″)

Old Farm House, Troutbeck, near Windermere.

By Norman Davey.] (Pencil : 5¾″ × 6¼″)

The Black Swan, Swanage.

By Frank M. Coombs.] (Water-colour : 11″ × 8½″)

A Corner of Winchester.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Construction of Concrete Silos

AN institution, engaged on the investigation of agricultural problems, reported deterioration of concrete silos under the action of acid juices and salts, formed or liberated during the fermentation of the green stuffs used in making ensilage.

Information was required on two points: (a) How to arrest deterioration in existing silos by surface treatment or other means; (b) What special precautions to take in erecting new silos.

It is understood that agricultural silos are usually constructed of precast concrete blocks or, occasionally, some form of reinforced concrete construction. In either case it is common practice to depend upon an internal layer of dense cement rendering to provide an impermeable lining which will confine the liquid products of fermentation. A silo was examined some time ago, which was built of precast concrete blocks, cement-rendered internally, and in which some trouble was experienced due to leakage of the liquor from the base. It was ascertained that the liquor had very little effect on the dense cement mortar rendering, but that where it had been possible for it to penetrate to the less dense concrete behind the rendering there was evidence of some deterioration. The penetration was found to be due to a limited number of faults in the rendering, some caused by defective consolidation under the trowel in application, and others by crazing or shrinkage. The problem is therefore considered to lie essentially in providing a sound, uncracked lining to prevent the penetration of the liquor to the more vulnerable material used in the body of the walls. The liquor is understood to be normally of low acidity, but is liable to attain a high temperature, approaching the boiling point of water, which will tend to increase the likelihood of the formation of cracks in the lining.

In order to minimize the risk of cracking of the cement-rendered lining, considerable care should be exercised. On account of the high shrinkage of rich cement mixes on drying out, it is advisable to use a mix not richer than 3 : 1. Density can be obtained by the use of a well-graded sand. Special precautions should be taken to wet the backing thoroughly before applying the rendering, and the work should be kept damp after application, preferably for about a fortnight.

Accounts have been published of experiments which have been carried out on slightly acid moorland waters, and these indicate that aluminous cement is likely to be more resistant than Portland cement to the deleterious action of acid liquors of the kind produced by ensilage.

Where deterioration of the linings of existing silos has occurred, the only treatment likely to be satisfactory is to strip the old rendering on the inside and to apply fresh material, taking the precautions already indicated. In view of the very severe conditions which the lining is called upon to withstand, it is open to doubt whether any practical treatment which can be suggested will provide a lining which will be completely free from all defects, but it may be mentioned that the defective silo previously referred to was treated on the lines of the foregoing recommendations, and is now reported to be satisfactory after two years in service.

Roughening Slippery Concrete Floors

A correspondent desired information of a treatment suitable for roughening the surfaces of concrete floors which had become very smooth and slippery as the result of traffic and wax carried from adjoining waxed linoleum.

In attempting to reduce the slipperiness of the floor, it will first be necessary to remove as much of the wax as is possible. This can be done by washing the surface with petrol or white spirit, taking the obvious precautions against fire.

After the wax has been removed, the smooth surface of the concrete, which usually consists of a film of neat cement, can sometimes be roughened by etching it with hydrochloric acid. If the cement film is thin, it will be removed by this means and the rougher aggregate exposed. In any case some reduction of slipperiness may be expected, although the surface may become smooth again under further traffic.

For the treatment, it is suggested that one volume of commercial hydrochloric acid be diluted with two volumes of water, the mixture applied copiously to the floor with a broom or mop, and well-brushed over the surface for ten or fifteen minutes. At the end of this time the acid should be washed off with plenty of clean water. Owing to the strongly corrosive nature of the mixture, it will be necessary to take care to prevent it from coming into contact with the skin or clothing. The dilution of the strong acid should be done out of doors, using earthenware or wooden vessels.

It is obviously desirable to ensure that any excess of acid is mopped up and to prevent its penetration through the concrete to the reinforcement. For this reason, it is well to treat limited areas at one operation, to exercise considerable care in the distribution of the acid, and to take special precautions where cracks have formed in the floor.

Corrosion of Metals by Magnesite Flooring

Contractors reported that they had recently experienced trouble on account of the corrosion of iron pipes, both water and gas, when laid in contact with magnesite floors, and asked for any information which could be supplied as to the best way of protecting pipes from such corrosion, and whether copper pipes are likely to be similarly affected.

It is generally found that magnesium oxychloride flooring contains an excess of magnesium chloride, and this exerts a very strongly corrosive action on iron and steel. An example of this in the case of a large office building was examined some time ago. Within a period of three years from the completion of the building, extensive leakage and corrosion of the piping of the heating system had occurred. On investigation, it was found that the corrosion had commenced at points where pipes passed through the magnesium oxychloride flooring, and it appeared that the corrosion had spread rapidly along the pipes as soon as small perforations allowed water to escape. The highly-corrosive nature of the magnesium chloride was shown very clearly where a large pipe had corroded under a concrete floor on which the magnesium oxychloride materials had originally been mixed, although, actually, the pipe was embedded in concrete and out of contact with the magnesite.

The action of magnesium oxychloride mixes on copper has not been studied in detail at this station, but it is known that slight corrosion occurs when copper is exposed to these mixes for a short time. It is not possible to state whether deterioration will be rapid, but, in view of the fact that copper is attacked, and that the walls of copper pipes are usually much thinner than those of steel or iron pipes, it is considered that the same precautions are desirable with copper as should be adopted for steel or iron pipes.

Corrosion of this kind may be easily avoided by inserting sleeves in the flooring where pipes pass through the corrosive materials. The use of sleeves of this kind has become a common practice, and they prevent the corrosive material coming in contact with the metal of the pipes. As an alternative, the pipes might be protected with a

thick coating of bitumen. It should be noted, however, that in experiments on the protection of metal pipes in soils, it has been shown that thin films of bitumen paint do not afford efficient protection against corrosion. Probably a more satisfactory method would be to apply a coat of bitumen, and then to wrap a piece of bitumen felt round the pipes, in order to obtain additional protection.

Use of Seashore Sand and Gravel in Concrete

Information was desired on the suitability of sand and gravel from the seashore as aggregates in mass concrete and reinforced concrete, for use in bridge work.

In mass concrete work, providing the concrete is well proportioned and carefully placed, the only trouble likely to be experienced from the use of unwashed sand and gravel from the seashore is that of an unsightly efflorescence on the face of the work.

The corrosion of the metal in reinforced concrete work is, of course, due primarily to the action of air and moisture on the metal, and is permitted either by the use of a badly-compacted concrete, or by the cracking of the concrete. If unwashed seashore sand and gravel are used in the work, and moisture has access to the reinforcement, the presence of the chlorides will tend to accelerate corrosion of the metal.

The removal of the whole of the salts in such aggregates by washing is difficult, but it is considered reasonably good practice to use washed seashore sand and gravel for the class of work mentioned, bearing in mind that any corrosion due to access of air and moisture, on account of poor workmanship in placing the concrete, may be somewhat accelerated by the traces of chlorides likely to be still present in the aggregates.

LITERATURE

ULSTER ARCHITECTS' YEAR BOOK

THE Year Book of the Ulster Society of Architects, 1931–32, which has reached its fourth year of publication, has recently been issued. It has been edited by Mr. J. L. Stevenson, L.R.I.B.A., the hon. secretary of the Society.

In the annual report of the Council for the year 1930–31 it is stated that the membership of the Society now totals 129—comprising 50 members, 17 hon. members, 40 associates and 22 students—showing an increase over that for the preceding year of 6 members.

The Council also state that it has placed for consideration with the Town Planning Committee a scheme for co-operation with speculative builders by the formation of a panel of architects to prepare plans in the hope that an improvement may be effected in suburban houses erected by private builders. This scheme was initiated in Staffordshire; under it assessors are appointed to consider the merits of plans sent in by members, and a special scale of charges is arranged for accepted designs. The consensus of opinion is that the younger members of the profession would be specially interested, and the Council of the Society hope to adopt a similar scheme.

The year book contains photographs of the president, Mr. R. H. Gibson, F.R.I.B.A.; and the immediate past president, Mr. J. A. Davidson, F.R.I.B.A.; the Society's memorandum of association and articles of association; suggestions governing the professional conduct and practice of architects; regulations for international architectural competitions; and a complete list of books on architecture and allied subjects in the Central and branch libraries of Belfast. A calendar covering the period July, 1931, to June, 1932, has also been incorporated.

The Year Book of the Ulster Society of Architects, 1930-31. Edited by J. C. Stevenson, L.R.I.B.A. *Belfast:* W. W. Clelland, Ltd.

THE ENGLISH SCENE

FIVE of the twelve studies in this book appeared originally in *The Times*, and the anonymous author has done well to rescue them from the old files of that newspaper, for all of them have more than ephemeral interest. The style is quiet and dignified, and a vast amount of useful information is conveyed without a hint of pedantry, whether the subject be windmills, canals, tithebarns, sports or punishments.

The beauty of England is a beauty of everyday things, of windmills and cider presses and lock gates. We admire afar off the grandeur of Durham or Chatsworth, but unless we are born to the purple it is the smell of a Kentish oast house or the swoop of a Downland windmill sail that really moves us. The village stocks were made for the legs of our grandsires, and the village pound for their strayed cattle. The author does not dissemble his preference for the leisurely life of the past before "the hour of noon" became "twelve sharp," but at the same time he holds the balance fairly. The pictures of Constable and Morland only tell half the story; old cottages and villages were seldom sanitary, and the picturesque was only a euphuism for rustic squalor.

If progress has uprooted us from the soil, it has made us at the same time more humane. Bull baiting, cock fighting, the ducking stool and the pillory are the darker side of the English Scene. The book is well produced, and the illustrations both well chosen and well reproduced.

LL. E. W.

The English Scene: The Spirit of England in the Monuments of her Social Life and Industrial History. London: Messrs. A. and C. Black, Ltd. Price 7s. 6d. net.

METAL PLATE LITHOGRAPHY

THE use of the lithographic process as a means of securing multiple copies of original drawings, whether for pictorial prints or for architectural renderings, is not new. Artists and draftsmen have been making lithographs for years and have found that the medium possesses many advantages. Most of the literature on this subject, however, has been addressed to the professional lithographic printer; the

[*From* The English Scene.

Tithe Barn and Dovecote, Hurley, Berkshire.

volume under review, therefore, is claimed to be the first to present the subject of metal plate lithography from the standpoint of the artist using this medium.

The text, illustrated by thumb-nail sketches by numerous artists, explains each step in the process, from the graining and preparation of plates to receive the drawing, to the miscellaneous points concerning manipulation. Formulas for the various solutions required, and a complete list of the necessary materials are also given.

The author, in his foreword, states that "Lithography is the simplest and most wonderful of all the graphic arts, and probably the most abused. That it is not understood clearly by present-day artists is evidenced by their proneness to remember the 'Chromo Days' whenever lithography is mentioned. If they but knew it, not only as the simplest and the most versatile, but also as the most autographic, of all the graphic arts, the lithograph would be restored to its rightful position in the print world."

The book should serve a twofold purpose, not only in providing a practical guide for the novice, but also in supplying a handy reference book containing the necessary technical information, formulas and methods of procedure in compact form for the sophisticated worker. K.

Metal Plate Lithography for Artists and Draftsmen. By C. A. Seward. New York: Pencil Points Press, Inc. Price $3.50.

Publications Received

The Human Parrot and Other Essays. By Montgomery Belgion. Oxford University Press: Humphrey Milford. Price 12s. 6d. net.

Art in the Life of Mankind: iii—*Greek Art and Its Influence;* iv—*Roman Art and Its Influence.* By Alan W. Seaby. London: B. T. Batsford, Ltd. Price 5s. each.

Turkish Architecture in South-Western Anatolia. By R. Riefstahl. London: Humphrey Milford. Price 17s. net.

LAW REPORTS

LIABILITY FOR FORECOURT—DISPUTED OWNERSHIP

Marston v. *Regent's Park Development Co., Ltd. Court of Appeal. Before Lords Justices Scrutton, Greer and Slesser*

THE dispute in this appeal was as to the ownership of a forecourt, which Mr. Wm. Marston, who met with an accident, said the defendants owned, and whom he sued for negligence before Lord Darling and a common jury, and recovered £810.

The defendants, the Regent's Park Development Co., Ltd., now appealed from that judgment, and asked for judgment or a new trial, saying that they did not own the strip of land in question, and in the alternative said, if they owned it, it had been dedicated to the public along with the rest of the other highway, and therefore they were not liable for the lack of repair into which it had fallen.

Mr. Macaskie, K.C., appeared for the appellants, and said his clients owned land at Regent's Park, and, amongst other property, 40 Frederick Street, Marylebone. This house had a forecourt, and it appeared that the plaintiff, in August of last year, fell into a small depression outside the house, and fractured his leg in two places.

Although the forecourt was open to the public to walk upon, it had never been conveyed to the appellants when they acquired this house and other property from Lord Howard de Walden. Some of the houses in the street had forecourts, but this house had not one, and in support of this statement counsel produced a layout plan. Counsel further argued that the damages which the jury had awarded the plaintiff were excessive, and that the judgment should be set aside and a new trial ordered.

Mr. G. T. Paull, for Mr. Marston, argued that the verdict of the jury was a conclusive one—they had found that there was no dedication of the forecourt to the public. It had not been suggested that his client was a trespasser, and it was for the appellants to prove that they had dedicated the forecourt to the public. Counsel contended that his client had ample cause of action. He alleged he met with an accident upon land which the appellants owned, that they had neglected to keep the forecourt in repair, which was a breach of their duty to an invitee, and that there here existed a hidden trap through which plaintiff had suffered as an invitee. Counsel further submitted that appellants, as owners of property alongside a highway, had permitted it to be a nuisance, whereby his client had suffered severe personal injury. Under these circumstances, he contended that the appellants had shown no ground for the Court to interfere with the verdict of the jury and the judgment of Lord Darling.

The Court dismissed the appeal with costs. By consent the damages were reduced to £550, the £260 claimed for treatment at a voluntary hospital being reduced from £810 awarded, as the hospital had no power to make charges to anybody.

Lord Justice Scrutton, in the course of his judgment, said the questions the Court had to determine were, whether there was any evidence on which the jury could have answered the questions left them by the Judge in the way they did, or whether there had been any misdirection by the Judge. With regard to the first point, the presumption was that the strip of land was owned by the defendants, and this was the result at which the Judge and jury arrived. The Court could not interfere with that finding unless the appellants got rid of that ownership by the plea that the land had been dedicated to the public. In his opinion there was here evidence upon which the jury could find that the land had never been dedicated. There was no misdirection by the Judge, and the appeal would be dismissed.

Lords Justices Greer and Slesser agreed.

MOTIONS BY THE CHARTERED SURVEYORS' INSTITUTE AND THE R.I.B.A.

Vacation Court. High Court of Justice. Before Mr. Justice Langton

In the Vacation Court, High Court of Justice, on Wednesday, September 9, Mr. Justice Langton had before him motions by the Chartered Surveyors' Institution and the Royal Institute of British Architects, to restrain Mr. Harry Geo. Leslie from using certain letters relating to his connection with the respective institutes.

The defendant, Mr. H. G. Leslie, appeared in person, and agreed to treat the motions as the trial of the action, and submit to a perpetual injunction in the first case, and to give an undertaking satisfactory to the plaintiffs in the second case. He also agreed to pay the costs in both actions.

His lordship made an order accordingly.

SCHOOL COURSES

BRIXTON SCHOOL OF BUILDING

The evening departments of the L.C.C. School of Building, Ferndale Road, Brixton, S.W., which commences on September 28, provide organized courses of training and individual classes for the purpose of instruction in the work of the building industry and of allied vocations and professions.

Although the courses of study and the scope of the instruction have been arranged primarily with a view to fitting the student for the practical duties of the various branches of the building industry, special consideration is given to the requirements of the recognized examinations held by independent bodies. Amongst these examining bodies the following receive special attention: The Institute of Builders, the R.I.B.A., the Chartered Surveyors' Institution, the Institution of Structural Engineers and the Institution of Sanitary Engineers.

The classes of the architecture department are planned to meet all the requirements of the student of architecture as regards design,

history of architecture and building, and drawing. The scheme of instruction is so arranged that an architectural course includes certain building subjects which are necessary to an architect's training.

A close co-ordination of the instruction in architecture and building construction is designed to ensure that the student shall obtain an intelligent grasp of the interdependence of the structural and æsthetic elements of his work. The grouping and scope of all the subjects are adapted to the requirements of the R.I.B.A.

The Principal of the School is Mr. F. E. Drury, M.I.STRUCT.E., M.SC.TECH.; the vice-principal Mr. A. Everett, B.SC., M.I.STRUCT.E.

NORTHERN POLYTECHNIC

The Northern Polytechnic School of Architecture, Holloway, N.7, the 1931–32 session of which commenced on September 21, is officially recognized by the R.I.B.A., and students who complete satisfactorily the first three years' course of study in the school and pass the school examinations, are exempted from the intermediate examination of that body.

The teaching staff consists of qualified practising architects, assisted by specialists in building science, acoustics, structural engineering, heating, ventilating, and other subjects relating to architectural practice. The department with which the school is associated also provides training for all branches of the building industry, and architectural students are thereby offered excellent opportunities of studying in the workshops and laboratories the many practical processes which they will ultimately be required to supervise.

The curriculum is arranged to provide the fullest possible training, and every aspect of architectural practice is dealt with by means of lectures, demonstrations, visits to buildings in course of erection and studio work.

The Head of the Department is Mr. T. E. Scott, F.R.I.B.A., and the Headmaster of the School of Architecture, Mr. F. E. Green, A.R.I.B.A.

L.C.C. SCHOOL OF ARTS AND CRAFTS

The new session of the L.C.C. School of Arts and Crafts, Southampton Row, W.C.1, will begin on Monday, September 28. The evening classes provide the following instruction for students of architecture: Architectural design, testimonies of study for the R.I.B.A., and town planning, given by Messrs. S. B. Caulfield, F.R.I.B.A., Basil Oliver, F.R.I.B.A., and E. Frazer Tomlins, F.R.I.B.A.; building construction, by Mr. F. H. Mansford, F.R.I.B.A.; structural mechanics, by Mr. Ewart S. Andrews, B.SC.; modelling and stone cutting, by Mr. Alfred Turner, A.R.A.; and general drawing, by Mr. F. W. Farleigh.

Other classes of interest to architectural students include life drawing, wood carving, metalwork, etc.

A series of visits and illustrated lectures dealing with recent developments in the manufacture and uses of various building materials has also been arranged. Architects, other than students in the school, may attend the lectures.

The Principal of the School is Mr. P. H. Jowett, A.R.C.A.

COMPETITIONS OPEN

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions were obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars were obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, SEPTEMBER 23

R.I.B.A., 9 Conduit Street, W.1. Exhibition of work submitted for the R.I.B.A. (Archibald Dawnay) Scholarships. 10 a.m. to 7 p.m. (Saturdays, 10 a.m. to 2 p.m.) Until September 25. Latest date for submission of applications for examination for the office of district surveyor. (Fee £3 3s.) **10 a.m.**

INTERNATIONAL ILLUMINATION CONGRESS. Faraday Exhibition Private View, Albert Hall. 10 a.m. to 4 p.m. British Association Centenary meeting. Delegates' Reception, Albert Hall. 3 p.m. Gen. Smuts (President, British Association) opens the Exhibition, Albert Hall. 4.30 p.m. Presidential Address to the British Association by Gen. Smuts, at the Central Hall, Westminster, S.W.1. 9 p.m. **10 a.m.**

INSTITUTE OF FUEL. At the Chemical Society's Premises, Burlington House, W. "The Reactivity of Coke. A Report to the Blast Furnace Committee, Iron and Steel Industrial Research Council." By J. G. King and J. H. Jones. **6 p.m.**

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. **Annual Exhibition.** Until Saturday, October 10.

THURSDAY, SEPTEMBER 24

INTERNATIONAL ILLUMINATION CONGRESS. Garden Party at the National Physical Laboratory, Teddington. 3 to 6 p.m. Soirée at the Royal Society, Burlington House, W. 8.30 p.m. **3 p.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Newcastle. "Modern Decoration." By John Gloag and Mrs. Grace Lovat Fraser, F.I.B.D.

FRIDAY, SEPTEMBER 25

INTERNATIONAL ILLUMINATION CONGRESS. At the Dorchester Hotel, Park Lane, W. Dinner given by H.M. Government to representative delegates and guests. Chairman: The Rt. Hon. Ramsay MacDonald, P.C.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. At the City Literary Institute, Goldsmith Street, E.C.2. "Architecture and the Art of the Machine." By R. A. Duncan, A.R.I.B.A.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. At Canterbury. Visits and papers.

SATURDAY, SEPTEMBER 26

Sunrise, 6.50 a.m. Sunset, 6.53 p.m.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. At Herne Bay. Visits and papers.

MONDAY, SEPTEMBER 28

L.C.C. SCHOOL OF BUILDING, Ferndale Road, Brixton, S.W.4. Commencement of New Session.

BRITISH COMMERCIAL GAS ASSOCIATION. Annual Conference to be held at Exeter. Until September 30.

TUESDAY, SEPTEMBER 29

R.I.B.A., 9 Conduit Street, W.1. Exhibition of drawings, including the whole of the British Section of the recent exhibition held in Berlin during the, Congress of the International Federation of Housing and Town Planning 10 a.m. to 7 p.m. (Saturday 10 a.m. to 5 p.m.) Until October 3.

WEDNESDAY, SEPTEMBER 30

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow.

SATURDAY, OCTOBER 3

Sunrise, 7.2 a.m. Sunset, 6.37 p.m.

MONDAY, OCTOBER 5

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First General Meeting of the Session.

BARTLETT SCHOOL OF ARCHITECTURE, University College, Gower Street, W.C.1. Commencement of New Session.

TUESDAY, OCTOBER 6

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. Council Meeting, followed by "The Great Decorative Artists —Past and Present." By Major A. A. Longden, D.S.O.

FRIDAY, OCTOBER 9

TOWN PLANNING INSTITUTE. Annual Country Meeting to be held at Bristol. Until October 11.

SATURDAY, OCTOBER 10

Sunrise, 6.14 a.m. Sunset, 5.22 p.m.

THURSDAY, OCTOBER 15

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. First of six lectures on "The History of English Architecture—XIIth Century." By Herbert Mansford. **7.30 p.m.**

FRIDAY, OCTOBER 16

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Council Meeting, 3 p.m. General Meeting, President's Address, 6.15 p.m. **3 p.m.**

SATURDAY, OCTOBER 17

Sunrise, 6.24 a.m. Sunset, 5.6 p.m.

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Manchester. "Modern Interior Decoration." By John M. Holmes.

TUESDAY, OCTOBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. Annual Dinner, to be held in the Empire Rooms, Trocadero Restaurant, Piccadilly Circus, W.1.

WEDNESDAY, OCTOBER 21

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Housing and town planning tour to Manchester and Liverpool. Departure to Manchester from Euston at 6.5 p.m.

TRADE NOTES

The twentieth annual conference of the British Commercial Gas Association will be held at Exeter from September 28 to 30. The President of the Conference is Mr. John E.. Daw, J.P., Chairman of the Exeter Gaslight and Coke Co.

At the annual general meeting, which precedes the Conference, the year's report and accounts will be presented by Sir Francis Goodenough, C.B.E., executive chairman. Among the principal speakers will be Sir Banister Fletcher, P.P.R.I.B.A., who will deliver an address on "Architecture as a Democratic Art"; Sir Leonard Hill, M.B., LL.D., who will give details of experiments with gas for the treatment of disease; Dr. L. Meredith Davies, M.D., B.CH., who will read a paper on "Public Health and the Gas Industry"; and Mr. Stephen Lacey, B.SC., who will explain how much time, thought and money are expended in research in order to provide first-class public service for gas consumers.

A booklet entitled *A Thousand and One Uses for Gas* has recently been published by the British Commercial Gas Association, in which are illustrated several types of gas fires and their surrounds, incorporated in rooms designed by prominent architects, including Messrs. Walter J. Tapper, F.R.I.B.A., T. S. Tait, F.R.I.B.A., and Charles W. Clarke, A.R.I.B.A. Each photograph is accompanied by a short description. The booklet may be obtained, free of charge, on application to the British Commercial Gas Association, 28 Grosvenor Gardens, London, S.W.1.

*

The main low-tension power, lighting and heating switchboard in Broadcasting House, Portland Place, W.1, a photograph of which is reproduced on this page, was manufactured by Messrs. Erskine Heap & Co., Ltd., at Lancashire Switchgear Works, Manchester. It consists of seventeen panels and a main 1,500 ampère incoming cubicle. The seventeen-panel board comprises drop-down oil switches (of which Erskine Heap were the original patentees), mounted on sheet-iron stands, complete with bus-bar chamber and change-over switches. In addition to this board, there are also several distribution boards and a main battery panel.

*

Messrs. Electrolux, Ltd., have recently received an order from Messrs. J. Lyons & Co., Ltd., the well-known caterers, for the supply of 1,000 Electrolux refrigerators for the conserving of ice-cream. These refrigerators, which, it is stated, will give employment to a large number of British workers during the winter, will be manufactured in the company's factories at Luton, Bedfordshire. It is interesting to record that less than twelve months ago Messrs. Electrolux received a similar contract from the same firm for the supply of 700 refrigerators. Thus, when the present contract is completed, Messrs. Lyons will have no less than 2,200 Electrolux refrigerators in use.

*

In extension of their new policy of running their own branches in place of local agencies, Messrs. Dorman Long & Co., Ltd., opened an office at Royal Insurance Building, Grey Street, Newcastle-on-Tyne, on September 1.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Broadcasting House, Portland Place, W.1 (pages 395-400 and supplement). General contractors, Ford and Walton, Ltd. Sculpture groups by Eric Gill. Sub-contractors : Anselm Odling and Sons, Ltd., Hopton-Wood stone; Aerocrete, Ltd., soundproof partitions; W. Aumonier and Sons, carving; Carrier Engineering Co., Ltd., heating and ventilating; Carter & Co. (London), Ltd., wall and floor tiling; Central Joinery Co. (1927), Ltd., doors; Crittall Manufacturing Co., Ltd., windows, roof lights and metal doors; Comyn Ching & Co., Ltd., metalwork; Dent and Hellyer, Ltd., sanitary installation; Haywards, Ltd., pavement lights and iron staircases; Independent Sprinklers, Ltd., fire protection; G. Jackson and Sons, Ltd., fibrous plastering; Korkoid Decorative Floors, floor finishings; Leeds Fireclay Co., Ltd., sanitary fittings; Marley Bros., Ltd., main bronze entrance doors; Moreland, Hayne & Co., Ltd., structural steelwork; E. Parkinson (London), Ltd., slating; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, floors and soundproof ceilings; Troughton and Young, Ltd., electrical installation; J. Whitehead and Sons, Ltd., marble floors; Waygood-Otis, Ltd., lifts; Birmingham Guild, bronze doors (internal); Carron Co., fireplaces; J. W. Gray and Sons, Ltd., lightning conductors; Jenson and Nicholson, Ltd., anti-corrosive paint; A. H. Davis, Ltd., expandable paint; Goodlass, Wall & Co., Ltd., paint generally; Eric Munday, Ltd., lettering; Midhurst Bricks, Ltd., white bricks; Burn Bros. (London), Ltd., drainage goods; Cement Marketing Co., Ltd., cement; Eastwoods, Ltd., blue bricks; Huntley and Sparks, Ltd., Cabot's quilting; Hollis Bros. & Co., Ltd., wood flooring; Le Grand, Sutcliffe and Gell, artesian well; Erskine, Heap & Co., Ltd., and Whipp and Bourne, Ltd., switchgears; Tudor Accumulator Co., Ltd., and Hart Accumulator Co., Ltd., storage batteries; Siemens Bros. & Co., Ltd., engineering telephone system; English Electric Co., Ltd., motors for ventilation, heating, etc.; Sturtevant Engineering Co., Ltd., vacuum cleaning; Patent Impermeable Millboard Co., Ltd., Insulwood insulation board; Merchant Trading Co., Ltd., Celotex; Anglo-Colonial Trading Co., Ltd., Donnaconna insulating and building board; Smith and Hammond, Ltd., broadcasting wiring.

New Central School, Windy Harbour, Birkdale (pages 401-403). General contractors, Duxfield Bros. (Southport), Ltd., who were also responsible for the joinery. Sub-contractors : The Penmaenmawr and Trinidad Lake Asphalte Co., asphalt; W. T. Lamb and Sons, bricks; Christie Patent Stone Co., artificial stone; T. Blackburn and Son, Ltd., structural steel; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, fireproof construction; Wm. Small & Co., tiles; Mitchell Bros., wood-block flooring; G. N. Haden and Sons, Ltd., central heating and boiler; Eagle Range Co., range; E. A. Clark, Ltd., grates; Butterworth and Robinson, electric wiring and electric light fixtures; Graham and Caddick, plumbing; Rowe Bros. & Co., Ltd., sanitary fittings; W. and R. Leggott, Ltd., door furniture; Samuel Parkes, swivel friction hinges; T. Southworth and Sons, plaster and decorative plaster; W. Calland and Sons, stonework; James Gibbons, Ltd., cloakroom fittings.

The main low-tension power, lighting and heating switchboard in Broadcasting House.

On page 232 of THE ARCHITECTS' JOURNAL for August 19 the name of Dr. Fritz Schumacher was inadvertently omitted as architect for the Cold Store for Herrings in Hamburg.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Messrs. Wm. Downs, Ltd., are to erect a new church for St. Mildred's, Addiscombe, CROYDON, from plans prepared by Mr. Cecil Hare.

The Middlesex Education Committee is considering the acquisition of Berkeley House and grounds for extensions at the HAMPTON grammar school.

The HESTON and ISLEWORTH U.D.C. is seeking sanction to borrow £12,500 for the layout of the Redless estate.

The LEWISHAM B.C. has passed plans, submitted by Mr. W. E. Trent, for the erection of a cinema and theatre in Loampit Vale.

Messrs. G. E. Marshall and Partners have submitted plans to the LEWISHAM B.C. for the erection of a stadium in Station Road, Catford.

Plans passed by the WOODFORD U.D.C. : Fifteen houses, Knighton Drive; fifty-four houses, Hillside estate; eighteen houses, Danbury Way.

SOUTHERN COUNTIES

The Ministry of Health is to hold an inquiry into six clearance schemes proposed by the BRIGHTON Corporation.

The BURGESS HILL, SUSSEX, U.D.C. is to erect another twenty houses.

The LEWES Corporation is to erect twelve houses on the Neville estate.

The NORTHFLEET U.D.C. is to erect eighty houses on the Wombwell Park estate.

The NORTHFLEET U.D.C. has sold a site on the Wombwell Park estate to the South Suburban Gas Co., for the erection of a gas compressor station.

Plans passed by NORTHFLEET U.D.C. : House, Wrotham Road, for Mr. F. Flateher; two bungalows, Southfleet Road, for Messrs. Bevan; houses, Singlewell Lane, for Mr. C. F. McInnes; two houses, Gouge Avenue, for Messrs. R. Hopkins and Sons; bungalow, Lewis Road, for Mr. N. Waterman; seven houses, Nelson Road, for Messrs. Barton and Burles.

The Godstone R.D.C. is to erect twenty-four houses at OXTED.

The SOUTHAMPTON Corporation has passed plans for the erection of a cinema, by Mr. A. C. Palmer, on the Regent site, Shirley.

MIDLAND COUNTIES

The Warwickshire Education Committee is to borrow £12,000 for extensions at ARLEY central school.

The Wesleyan Reform Union trustees are to erect a school at CHILVERS COTON, Warwickshire, at a cost of £3,000.

The COVENTRY Education Committee is to erect an elementary school in Moseley Avenue.

Mr. H. S. Scott has prepared plans for the erection of a cinema in Tamworth Street, LICHFIELD.

Plans passed at OXFORD :—Extensions, 108 Hurst Street, for Mr. R. Moss; additions, Arlosh Hall, for the trustees of the Manchester College; business premises, 11 New Road, for Messrs. Davey's, Ltd.; conversion into business premises, 8 Worcester Place, for Mrs. Walklett.

The Staffordshire Education Committee is to extend the elementary schools in Clarance Street and Biltson Street, SEDGLEY.

The Midland Electric Corporation is to erect a sub-station at Spring Head, SEDGLEY.

Plans passed by the SEDGLEY U.D.C. : Two houses, Wolverhampton Road, for Mr. F. B. Waterhouse; house, Vale Street, for Mr. J. Rollason; house, Eve Lane, for Mr. W. Hale; seven houses, Claremont Road, for Mr. F. H. Roberts; two houses, Gospel End Road, for Mr. S. Brookes; rope works, Burton Road, for Messrs. W. S. Gorton and Sons, Ltd.; bungalow, Dibdale Road, for Mr. J. Beese; house, Gorge Road, for Mr. Fletcher; house, Goldthorn estate, for Mr. E. Eggington; house, Goldthorn estate, for Mr. F. J. Leech; two houses, Turls Hill Road, for Messrs. T. Twigg & Co.; club premises, The Walk, for Sedgley Ex-servicemen's Club; shop, Dudley Street, for Mr. J. Hawthorne.

The WEDNESBURY Education Committee is to enlarge the elementary school in Holywell Road from plans prepared by Messrs. Joynson Bros.

Mr. E. Jones is to reconstruct the Alexandra cinema, Lower Gornal, WORCESTERSHIRE.

NORTHERN COUNTIES

The ALTRINCHAM U.D.C. is to erect sixty-six houses on the Princes Street estate.

The BARNSLEY Corporation is to prepare plans for the erection of eighty houses on the Shepherds Farm estate.

The BENTLEY, Yorks, U.D.C. is to erect another ninety-six houses.

The BLACKBURN Corporation is to erect 376 houses on the Longshaw estate.

The BLACKPOOL Education Committee is to erect an elementary school in Highfield Road.

The BLACKPOOL Corporation is to erect about 300 houses on the Lewton Park estate.

The BRIDLINGTON Education Committee has passed plans for the erection of a senior school for 800 scholars, at an estimated cost of £36,000.

The Watch Committee of the CARLISLE Corporation is considering sites suggested for the proposed establishment of a central bus and parking station.

The CARLISLE Corporation has purchased property in Old Greystone, required for housing purposes.

Plans passed by the CARLISLE Corporation : Extensions for Nestlés and Anglo-Swiss Milk Co., Currock Road, for Mr. H. Foxall; pavilion, Newtown, for Messrs. Carr & Co., Ltd.; sales room, The Crescent, for Messrs. W. L. Tiffen and Sons; four houses, Brampton Road, and lay out of Harraby Farm estate, for Mr. S. W. B. Jack; additions, Cathedral Lodge, Castle Street, for Mr. F. Martindale, on behalf of the Dean and Chapter; church hall, Blackwell Road, for Mr. F. Martindale, on behalf of Archdeacon Campbell; three houses, Newtown Road, for Mr. H. E. Scarborough.

Mr. J. Clayton has prepared plans for the erection of a cinema at Bondgate, DARLINGTON.

The DONCASTER Corporation is to extend the highways depot and erect cottages for workers.

The North Riding Education Committee is to erect an elementary school for 280 senior scholars at DORMANSTON.

The North Riding Education Committee has obtained land in South Bank, ESTON, for the erection of a secondary school.

The HUDDERSFIELD borough architect has prepared plans for the erection of 148 houses on the Northgate estate, and fifty on other estates.

The ILKESTON Corporation is to erect a further eighteen houses on the northern housing estate.

The LANCASTER Corporation has decided to erect another fifty houses.

The LEEDS Corporation is to erect a sports pavilion at the Roundhay playing fields.

The LEIGH Corporation is to erect ninety houses on the council housing estate.

The LIVERPOOL Corporation is to erect 246 houses in Speke Road, Garston.

The LIVERPOOL Corporation is to erect a bank and two shops in the shopping centre of the Norris Green housing estate.

The MANCHESTER Education Committee has obtained sanction to borrow £45,000 for the provision of school accommodation on the Ladybarn estate.

The MANCHESTER Education Committee has obtained sanction for a loan of £13,700 for the erection of a nursery school and domestic subjects centre in Palmerston Street, Ancoats.

Messrs. Chamberlain and Willows are seeking sites in OSSETT for the erection of a model factory and warehouse premises.

The Catholic trustees are to erect a school at Latchford, RUNCORN.

The SCARBOROUGH Corporation is seeking sanction to borrow £64,000 for the erection of shops, offices, flats and business premises.

The SCARBOROUGH Corporation is seeking sanction for a loan of £30,750 for the extension of the North Bay promenade.

The YORK Corporation has passed plans for the erection of 182 houses on the Garrow Hill estate.

The YORK Corporation is to erect an electricity sub-station at Bishopsthorpe.

The governors of YORK County Hospital have under consideration plans for extensions, prepared by Mr. E. Stanley Hall.

The YORK Corporation reports that the housing programme involves the erection of 1,500 houses during the next five years, of which number 650 are intended specially for re-housing.

Plans passed by the YORK Corporation : Two houses, Jamieson Terrace, for Mr. W. Johnson; additions, "Nag's Head" Inn, Hewarth, for Messrs. John Smith, Ltd.; layout of Count de Burgh Terrace and Trafalgar Street, for Mr. H. C. De Burgh; dairy, Haxby Road, for York Industrial Society, Ltd.; two houses, Main Avenue, for Messrs. W. West, Ltd.; shops, Museum Street and Hetherton Street, for Mr. J. Hetherton; two bungalows, Copmanthorpe, for Mr. A. Bennett.

SCOTLAND

The GLASGOW Corporation has passed plans for extensions at the Cinema, Dumbarton Road, Partick, for the Rosevale Cinema, Ltd.

The GLASGOW Corporation is to negotiate for land in Trossachs Street for housing purposes.

WALES

The Monmouthshire Education Committee is to erect an infants' school at BEDWAS.

The Monmouthshire Education Committee is to extend the CHEPSTOW secondary school.

The Denbighshire Education Committee is to erect a technical school centre at LLANRHAIADR from plans prepared by Mr. W. D. Wiles, the county architect.

The SWANSEA Corporation has asked the borough architect to prepare estimates for various improvements at the branch libraries.

The SWANSEA Corporation is seeking sanction for a loan of £100,000 for housing advances.

The Ministry of Health has approved the proposal of the SWANSEA Corporation to erect a further hundred houses on the Townhill estate. The Corporation is to inquire if the Ministry will sanction the erection of the houses by direct labour.

The SWANSEA Education Committee has acquired a site at Baptist Well for the erection of an elementary school.

The SWANSEA Education Committee is to consider the provision of a school at West Cross.

The SWANSEA Corporation is seeking sanction to borrow £8,480 for widening the railway bridge in Station Road, Cockett.

Plans passed by the SWANSEA Corporation : Eight houses, off Middle Road, for Mr. Edmund Tucker; two houses, New Road, Manselton, for Mr. Gordon Davey; additions, Fabians Bay Congregational Church, for the trustees; two houses, Pwll Street, for Mr. Wm. John; alterations, Gem cinema, Sway Road, Morriston, for Mr. W. E. Ballard; six houses, Lon Coed Bran, for Mr. S. D. Thomas; extensions, factory, Cockett Road, for Messrs. Strutton & Co.; two houses, Penyheol Drive, for Mr. J. J. Aubery; two houses, Cockett Road, for Mr. W. Evans; two houses, Middle Road, Gendros, for Mr. J. Jewell; rebuilding showrooms, Mumbles Road, for Mr. Chas. Williams; two houses, Carmarthen Road, for Mr. W. Evans; store, Swansea Castle, for Swansea Press, Ltd.; shop and two houses, Gelligrafog Road, for Mr. John Pye.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A2	Atherstone	Mid. Counties	1 5	1 0½
B2	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0½
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A2	Bewdley ..	Mid. Counties	1 5½	1 1½
B2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0½
A2	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B2	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B2	Brixham ..	S.W. Counties	1 3	11½
A2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A2	Crewe ..	N.W. Counties	1 5½	1 1½
A2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11½
A2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11½
A2	Driffield ..	Yorkshire	1 5	1 0½
A2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	*1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0½
A2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1½
A2	Goole ..	Yorkshire	1 5½	1 1½
A2	Gosport ..	S. Counties	1 5	1 0½
A2	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11½
A2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0½
B2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1½
A2	Kiddermin-ster	Mid. Counties	1 5½	1 1½
B2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11½
A2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1½
B2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0½
A2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1½
A2	Skipton ..	Yorkshire	1 5½	1 1½
A2	Slough ..	S. Counties	1 5	1 0½
A2	Solihull ..	Mid. Counties	1 5½	1 1½
A2	South'pton	S. Counties	1 5	1 0½
A2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1½
A2	Welling-borough	Mid. Counties	1 5½	1 1½
A2	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1½
A2	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	8
Carpenter	,,		1	8
Joiner	,,		1	8
Machinist	,,		1	9
Mason (Banker)	,,		1	8
,, (Fixer)	,,		1	9
Plumber	,,		1	8
Painter	,,		1	7
Paperhanger	,,		1	8
Glazier	,,		1	8
Slater	,,		1	8
Scaffolder	,,		1	4
Timberman	,,		1	4
Navvy	,,		1	3
General Labourer	,,		1	3
Lorryman	,,		1	5½
Crane Driver	,,		1	7
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	8	6
Blue Lias Lime	,,	2	10	6
Hydrated Lime	,,	2	16	0
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		8	9
¾" Crushed Ballast	,,		10	0
Building Sand	,,		10	6
Washed Sand	,,		11	6
2" Broken Brick	,,		9	6
½" ,, ,,	,,		12	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

		4" s.	4" d.	6" s.	6" d.
Straight pipes	per F.R.	1	1	1	6
Bends	each	2	10	4	4
Taper bends	,,	6	3	7	2
Rest bends	,,	5	9	8	9
Single junctions	,,	3	9	5	9
Double ,,	,,	5	9	8	9
Straight channels	,,	2	6	3	2
¼ Channel bends	,,	7	8		—
Channel junctions	,,	7	0	12	6
Channel tapers	,,	5	6	7	9
Yard gullies	,,	9	6	11	6
Interceptors	,,	18	6	25	9
Iron drain pipe	per F.R.	2	3	3	5
Bends	each	6	0	13	0
Inspection bends	,,	15	3	24	0
Single junctions	,,	9	3	18	0
Double junctions	,,	14	0	27	6
Lead wool	lb.		6		—
Gaskin	,,		5		—

BRICKLAYER

		£	s.	d.
Flettons	per M.	3	1	6
Grooved do.	,,	3	3	6
Stocks, 1st Quality	,,	4	18	6
,, 2nd ,,	,,	4	12	6
Blue Bricks, Pressed	,,	9	18	0
,, Wirecuts	,,	8	16	0
,, Brindles	,,	8	0	0
,, Bullnose	,,	10	8	0
Red Sand-faced Facings	,,	7	11	0
Red Rubbers for Arches	,,	15	0	0
Multicoloured Facings	,,	9	4	6
Luton Facings	,,	8	16	0
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, Add	,,	2	0	0
,, Other Colours ,,	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	9
2½" ,, ,, ,,	,,		2	0
3" ,, ,, ,,	,,		2	3
4" ,, ,, ,,	,,		3	0

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	9
,, Sawn templates	,,	7	6
,, Paving, 2"	F.S.	1	8
,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	31	0	0
22" × 12" Marchionesses	,,	28	0	0
20" × 10" Countesses	,,	20	5	0
18" × 10" Viscountesses	,,	17	0	0
18" × 9" Ladies	,,	15	0	0
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20"× 10" medium grey	per 1,000 (actual)	26	0	0
,, ,, green	,,	27	15	0
Best machine roofing tiles	,,	5	0	0
Best hand-made do.	,,	5	10	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.			4
,, copper	,,		2	0

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	6
Birch	as 1" F.S.			9
Deal, Joiner's,	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English ,,	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ⅜"	Sq.	1	1	0
,, ½"	,,	1	3	6
,, ⅝"	,,	1	5	6
,, ¾"	,,	1	11	0
,, 1"	,,	1	15	0
Deal matchings, ⅜"	,,		16	0
,, ½"	,,		17	6
,, ⅝"	,,	1	6	0
Rough boarding, ½"	,,		18	0
,, ¾"	,,	1	0	0
,, 1"	,,	1	8	0

Plywood, per ft. sup.

Thickness	¼" d.	⅜" AA. d.	⅜" A. d.	⅜" B. d.	½" AA. d.	½" A. d.	½" B. d.	¾" AA. d.	¾" A. d.	¾" B. d.
Qualities										
Birch	4	3	2	5	4	3	7½	6	4½	8½ 7 6
Alder	3½	3	2	5	4	3	6½	5½	4½	8 7 6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½ 10 –
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6 – –
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0 – –
Oregon Pine	5	4	–	5½	5	–	6	–	–	– – –

	d.
Scotch glue	lb. 8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½" d.	¾" d.	1" d.	1½" d.	2" d.
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square ,,	10	1/1	1/6	2/2	4/3
Tees ,,	1/–	1/3	1/10	2/6	5/1
Crosses ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges ,,	9	1/–	1/4	1/9	2/9
Caps ,,	3½	5	8	1/–	2/–
Backnuts ,,	2	3	5	6	1/1
Iron main cocks ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.	Per cent.		Per cent.
Gas	62½	Galvanized gas	50
Water	58½	,, water	45
Steam	55	,, steam	40

FITTINGS.	Per cent.		Per cent.
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued.*

		s.	d.
Rolled steel joists cut to length	cwt.	9	6
Mild steel reinforcing rods, ½"	,,	10	0
,, ,, ⅝"	,,	9	9
,, ,, ¾"	,,	9	6
,, ,, ⅞"	,,	9	0
,, ,, 1"	,,	9	0
,, ,, 1¼"	,,	9	0
,, ,, 1½"	,,	9	0
,, ,, 2"	,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal		3" F.R.	3" s.	3" d.	4" F.R.	4" s.	4" d.
			7			10	
Shoes	each	2	3		3	3	
Anti-splash shoes	,,	5	0		8	6	
Boots	,,	3	3		4	6	
Bends	,,	2	9		4	0	
,, with access door	,,	—			6	9	
Heads	,,	4	0		5	0	
Swan-necks up to 9" offsets	,,	4	0		6	3	
Plinth bends, 4½" to 6"	,,	4	0		5	6	
Half-round rain-water gutters of ordinary thickness metal	F.R.		5			6	
Stop ends	each		6			7	
Angles	,,	1	7		1	11	
Obtuse angles	,,	2	0		2	6	
Outlets	,,	1	9		2	3	

PLUMBER

		s.	d.
Lead, milled sheet	cwt.	20	0
,, drawn pipes	,,	20	6
,, soil pipe	,,	23	6
,, scrap	,,	10	0
Solder, plumbers'	lb.		11
,, fine do.	,,	1	3
Copper, sheet	,,	1	9
,, tubes	,,	1	4

L.C.C. soil and waste pipes:		3" F.R.	3" s.	3" d.	4" F.R.	4" s.	4" d.
Plain cast	F.R.	1	0	1	2	2	8
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	8	6
Plaster, coarse	,,	2	10	6
,, fine	,,	3	10	0
Hydrated lime	,,	2	16	0
Sirapite	,,	3	10	0
Keene's cement	,,	3	10	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz.	F.S.					3½
,, ,, 26 oz.	,,					4½
Arctic glass	,,					5
Cathedral glass	,,					6
Hartley's rough rolled	,,					9
Do. wired plate	,,				1	3
¼" Polished plate, n/e 1	,,	1	0	to	1	3
,, ,, 2	,,	1	2	,,	1	7
,, ,, 3	,,	1	7	,,	2	5
,, ,, 4	,,	2	1	,,	2	11
,, ,, 6	,,	2	3	,,	3	2
,, ,, 8	,,	2	6	,,	3	6
,, ,, 12	,,	2	9	,,	3	8
,, ,, 20	,,	3	0	,,	3	11
,, ,, 45	,,	3	3	,,	4	1
,, ,, 65	,,	3	7	,,	4	6
,, ,, 90	,,	3	10	,,	4	0
,, ,, 100	,,	4	0	,,	5	0
Vita glass, sheet, n/e 1	,,				1	0
,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1	,,				1	0
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,,over 15	,,				7	6
Putty, linseed oil	lb.					3

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		3	3
Boiled oil	,,		4	3
Turpentine	,,		3	8
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add	3 0
If in underpinning	"	5 0
Digging, return, fill and ram	"	5 0
Flanking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " " "	"	2 1 6
1½" " " " " "	"	2 7 6
2" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
½" do.	"	3 4 0
¾" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1½" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅞" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " " " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1¼" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	"	1 19 0
Do. in covering to turrets, etc.	"	2 6 0
Do. in soakers	"	1 12 0
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—
4" cast-iron ½-rd. gutter and fixing						F.R.	1 3
Extra, only stop ends						Each	1 0
Do. angles						"	1 6
Do. outlets						"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on						F.R.	1 6
Extra, only for shoes						Each	2 6
Do. for plain heads						"	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh	Y.S. 3 9
Do. in n/w to beams, stanchions, etc.	" 5 6
Lathing with sawn laths to ceilings	" 1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	" 2 6
Do. vertical	" 2 9
Rough render on walls	" 2 3
Render, float and set in lime and hair	" 3 0
Render and set in Sirapite	" 3 3
Render, backing in cement and sand, and set in Keene's cement	" 4 6
Extra, only if on lathing	" 9
Keene's cement, angle and arris	F.R. 8
Arris	" 3
Rounded angle, small	" 3
Plain cornices in plaster, including dubbing out, per 1" girth	" 2
1" granolithic pavings	Y.S. 5 0
1½" " " "	" 6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	" 1 2 6
9" × 3" " " "	" 1 7 0
Extra, only for small quadrant angle	F.R. 9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	" 1 0
Arctic glass and glazing with putty	" 1 2
Cathedral glass and do.	" 1 3
Glazing only, British polished plate	" 8
Extra, only if in beads	" 2
Washleather	F.R. 4

PAINTER

	s. d.
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	" 1 0
Do. with washable distemper	" 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	" 3 3
Do. on woodwork	" 3 6
Do. on steelwork	" 3 0
Do. and brush grain and twice varnish	" 5 6
Stain and twice varnish woodwork	" 1 11
Stain and wax-polish woodwork	" 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 6
Hanging ordinary paper	from " 3 0

BROADCASTING HOUSE

THE ARCHITECT'S DETAIL DRAWING OF THE SOUTHERN END

[G. Val Myer, Architect.

THE ENTRANCE TO THE MAIN RECEPTION HALL

ABOVE is a photograph of the main entrance to the new building now nearing completion for the British Broadcasting Corporation on a corner site at the southern end of Portland Place, W. It should be compared with the architect's working drawing of this apex of the structure reproduced overleaf, and with the exterior view which appears elsewhere in this issue.

The building will have a dual purpose, namely, to serve as a broadcasting station and to house the administrative offices of the B.B.C.

The studios are placed in a tower occupying the centre of the site, and are encircled by the offices. This type of plan has been adopted, in conjunction with special constructional methods, to eliminate street noises and the risk of sound-transmission from one studio to another.

The whole of the exterior of the building is faced with Portland stone. A sculptured figure by Eric Gill is to occupy the niche over the main entrance, indicated above.

BROADCASTING HOUSE
PORTLAND PLACE W
DETAILS OF FACADES

NOTE ALL DIMENSIONS MUST BE TAKEN FROM THE ACTUAL BUILDING AND ANY DIMENSIONS SHOWN ON THE DRAWINGS ARE TO BE CAREFULLY CHECKED. STONE BEDS GENERALLY ARE TO BE 45° WITH A BED TO EVERY 4 1/2" COURSE. SETTING OUT DRAWINGS IN ALL CASES TO BE SUBMITTED TO THE ARCHITECT & HIS APPROVAL OBTAINED BEFORE WORK IS PUT IN HAND

SCALE OF FEET

PLAN AT SIXTH FLOOR

SECTION thro PARAPET

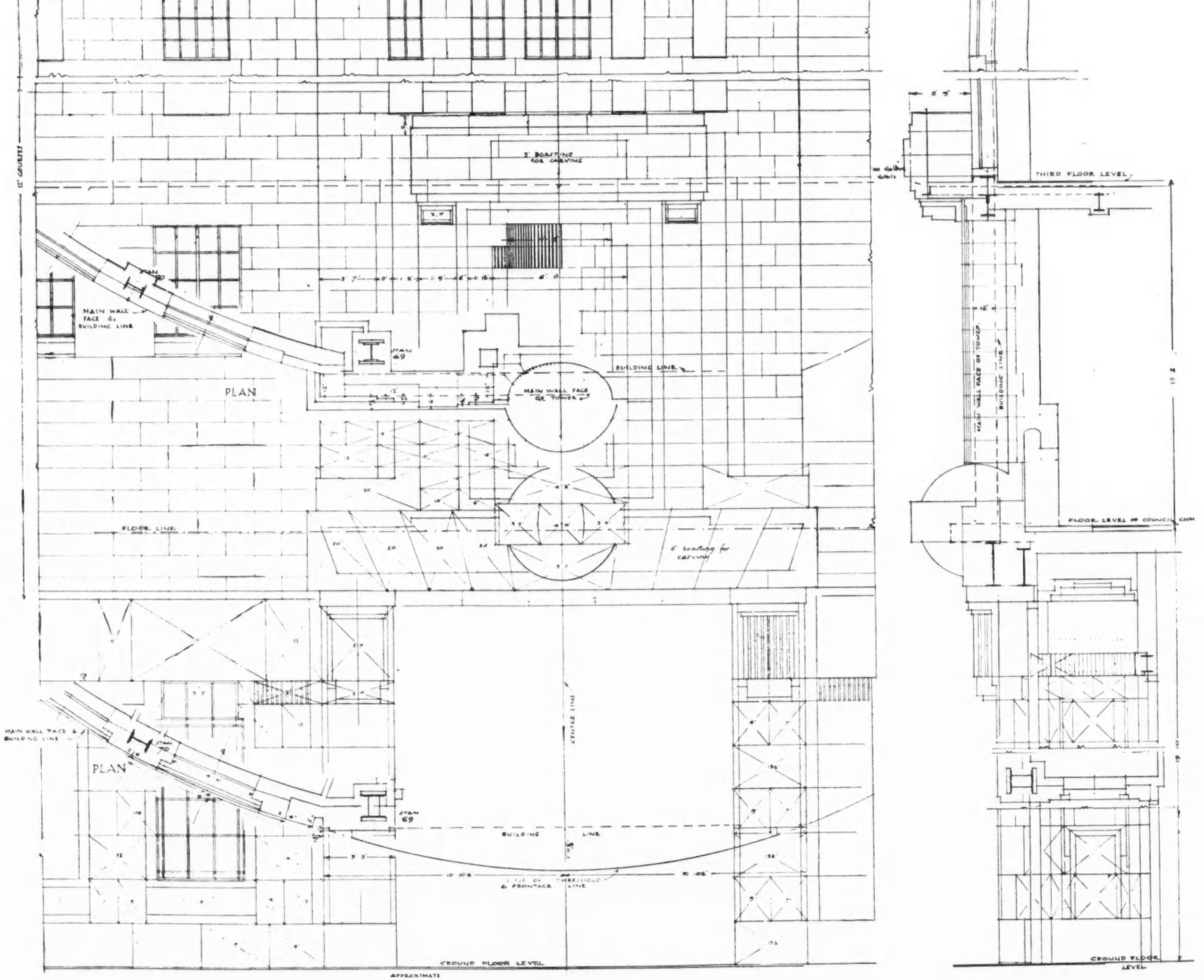
SIDE ELEVATION of TOWER

SEVENTH FLOOR LEVEL

SIXTH FLOOR LEVEL

FIFTH FLOOR LEVEL

MAIN WALL FACE OF TOWER



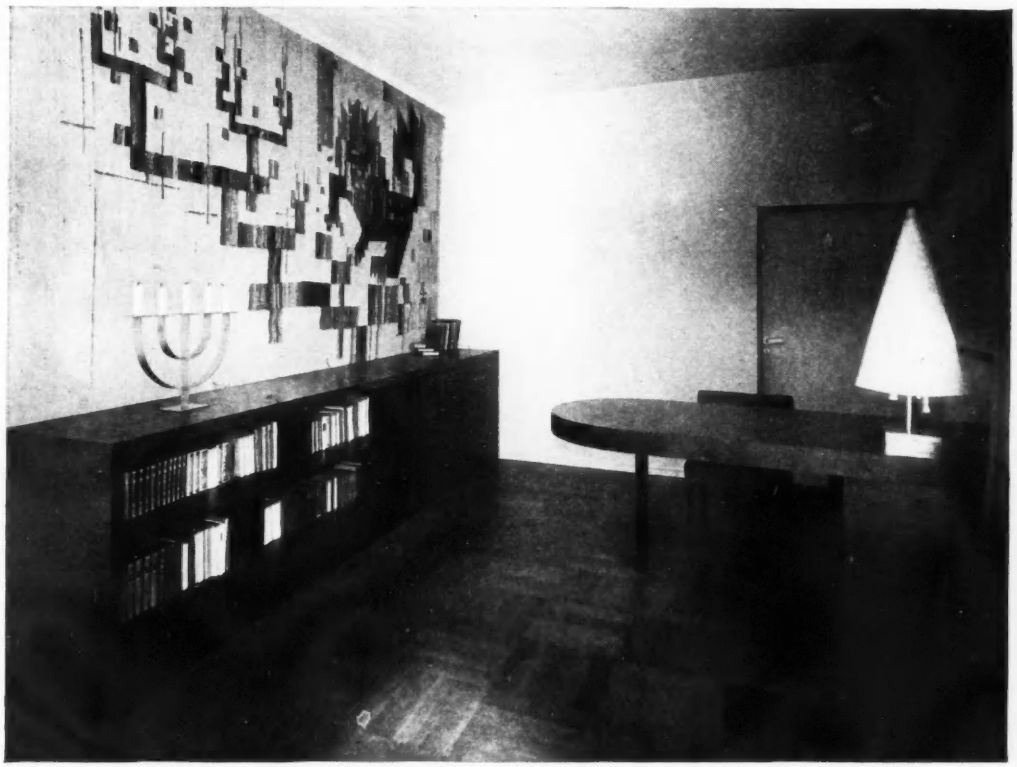
ELEVATION OF CIRCULAR END DEVELOPED

ELEVATION OF SOUTH TOWER

SECTION on CENTRE LINE

IN A VILLA AT INNSBRUCK

AN AUSTRIAN ARCHITECT'S FITTINGS FOR LIBRARY, BOUDOIR AND KITCHEN



[Lois Welzenbacher, Architect.

THE WRITING DESK, WITH CUPBOARD, IN THE LIBRARY

ONE of the articles in this issue illustrates and describes a villa at Innsbruck, in which all the interior fittings and furniture have been designed and disposed by the architect. The present supplement gives details of some of these.

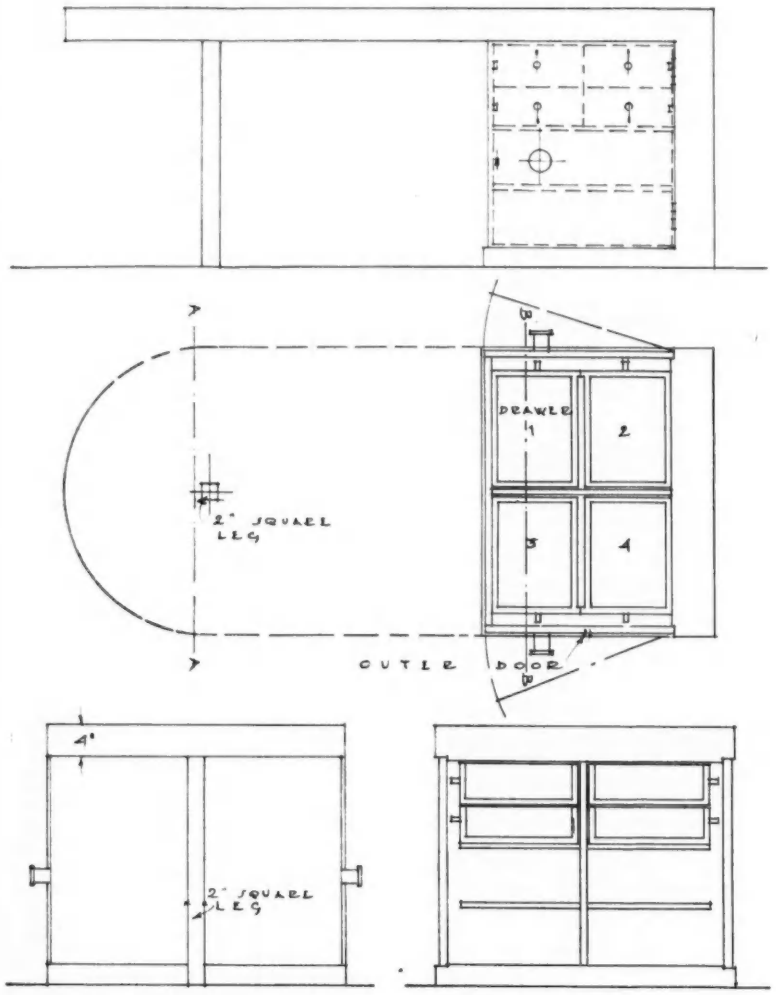
Above and on the following page are a photograph and scale drawings of the library cupboard-table. The table-top, 4 ins. deep, is supported against the wall by the cupboard, and at its semicircular end by a 2-in. square leg, placed centrally to give ample knee-room all round. The cupboard is divided down the centre to form two compartments, each of which has a single-panel, flush door of laminated wood, which conceals a suite of four drawers with shelves below—a neat and dust-proof arrangement adopted throughout the house, and giving to the furniture its appearance of simplicity.

The circular mirror of $\frac{1}{4}$-in. silvered polished plate-glass, pictured on the last page and in drawings overleaf, is contained in a chromium-plated metal frame, and is adjustable. The main upright member is a $1\frac{1}{4}$-in. diam. hollow plated tube; and on it runs a length of $1\frac{1}{2}$-in. diam. tube, with an adjustment screw. To this larger tube the mirror is attached by jointed brackets, so that both its height and inclination can be governed. The base is weighted to counteract any tendency to overbalance, but it is not fixed to the floor. A tray of $\frac{1}{2}$-in. polished plate-glass forms a dressing-table, and is supported on a grid of plated steel.

The kitchen-scullery, of which drawings will also be found within, is particularly well and compactly planned. The isometric drawing and plan clearly show its features and their arrangement.

IN A VILLA AT INNSBRUCK

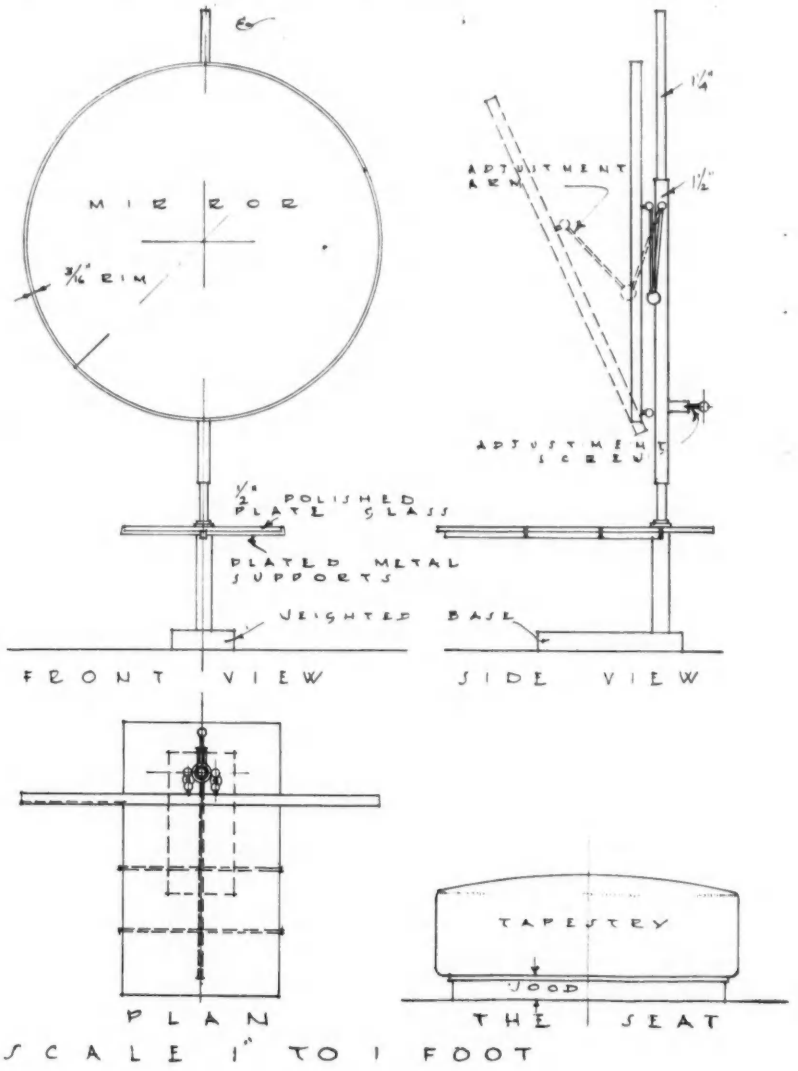
WRITING DESK WITH CUPBOARD



SECTION A-A. SECTION B-B

SCALE 1" TO 1 FOOT.

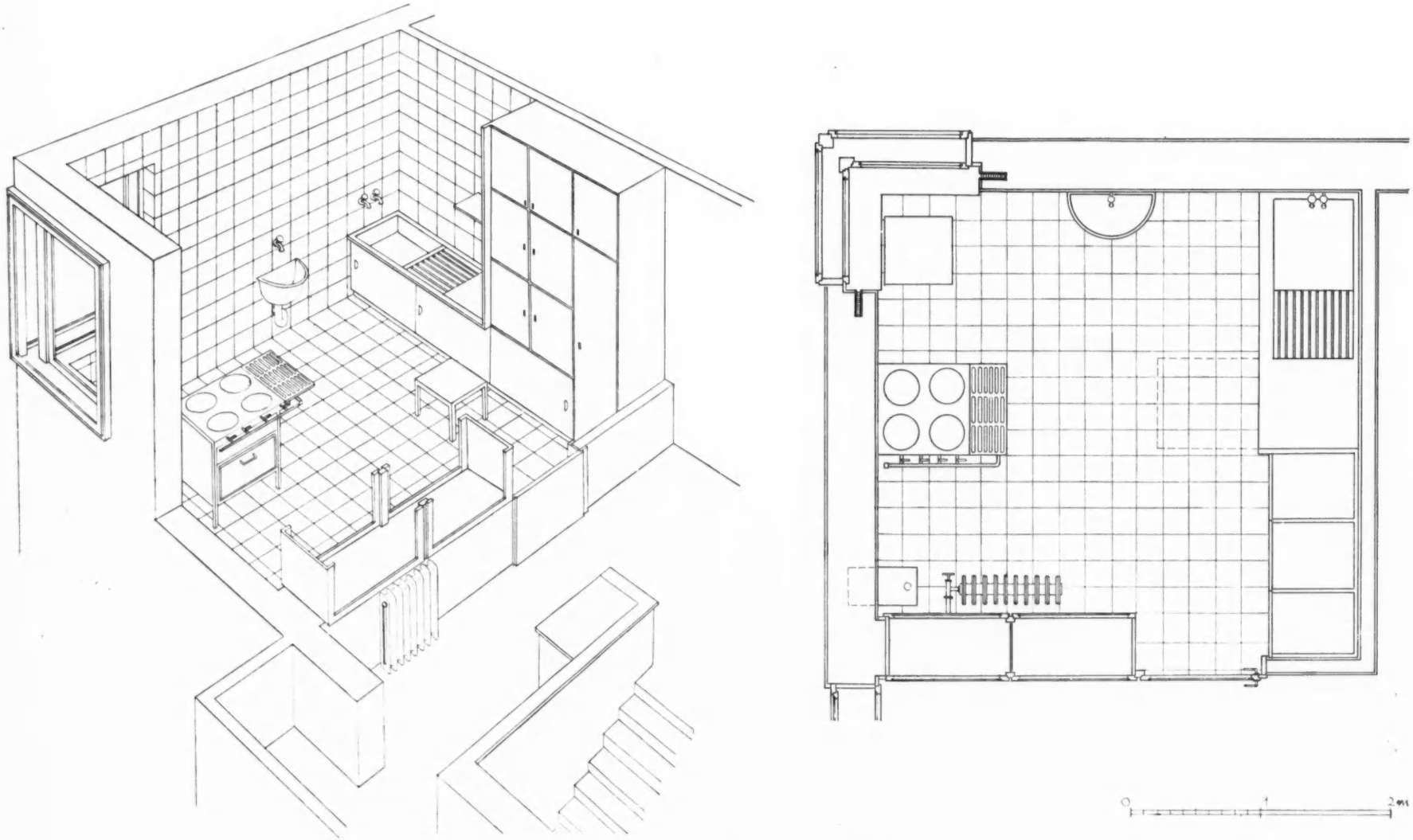
DRESSING TABLE & MIRROR IN GLASS & METAL



FRONT VIEW SIDE VIEW

PLAN THE SEAT

SCALE 1" TO 1 FOOT



FITTED KITCHEN - SCULLERY : ISOMETRIC DRAWING AND PLAN

[*Lois Welzenbacher, Architect.*

[*Lois Welzenbacher, Architect.*

THE TOILET MIRROR, WITH GLASS SHELF-TABLE, IN THE BOUDOIR

SELECTED PRECEDENTS:

TYPES OF TRIPLE-SPAN ROAD BRIDGES IN CONCRETE FROM THE CONTINENT

1. *THE SKURU BRIDGE, NEAR STOCKHOLM.*

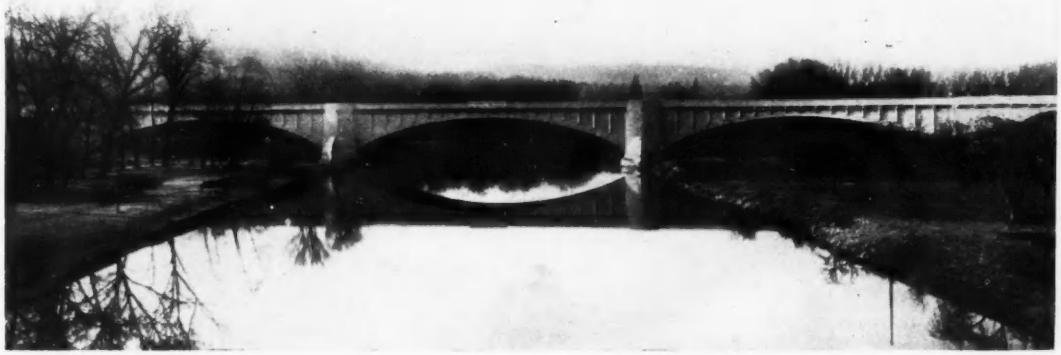
THE triple-arched bridge satisfies our æsthetic sense even more completely, perhaps, than the single span. It seems a just and proper distribution: one for the river itself, and one for each of its banks. Moreover, three is notoriously both a lucky and a magic number, and not the least part of its magic lies in the way it has of providing a central focus between two bodies identical with itself. When we look at a triple bridge, it is always the centre arch which first arrests our attention.

The triple "bowstring" is a particularly airy and graceful type of design in concrete. Figures 3 and 5, the one in Sweden and the other in France, are of very similar design. It will be noticed that in both the vertical supports are not, as is usually the case, also made of concrete, but consist of very slender iron rods. The object of this variation is to help to counteract the occasionally excessive rigidity of the concrete bow, which is apt to cause cracks during spells of very cold weather. The first of these two bridges, built in 1928, which traverses the Fax River, near Stamsele, consists of three equal spans of 55 metres. The spans of the second, which was built in 1924, are all 55 metres long; while the platform is 5·30 metres wide.

Figure 1 is a view of the famous Skuru Bridge over an arm of the sea near Stockholm, which is now too well known to call for any comment except that few bridges yet built in any material are more serenely beautiful and inspiring.

Figure 2, a very imposing design, shows a new bridge over the River Neckar at Cannstadt, a suburb of Stuttgart, which is rather reminiscent of some of Mr. Maxwell Ayrton's earlier bridges. What looks like Modernist decorative motifs are really rows of brackets supporting the pavements, which are cantilevered out from the road platform. The same device is used in the example shown in Figure 4, a semi-hexagonal, flat-arch bridge spanning the Spree at Alt-Schadow, not far from Berlin. In this case, however, the pavement brackets are much shallower. This bridge, which was built in 1927, and has a length of 76 metres, rests on massive concrete girders of 5·20 by 1·25 metres section.

P. MORTON SHAND



[By courtesy of Dyckerhoff and Widmann, Wiesbaden-Biebrich.

2. *BRIDGE OVER THE RIVER NECKAR AT CANNSTADT, NEAR STUTTGART.*

3. *BRIDGE ACROSS THE FAX RIVER, STAMSELE, SWEDEN.*

[*By courtesy of Christiani and Nielsen, Copenhagen.*

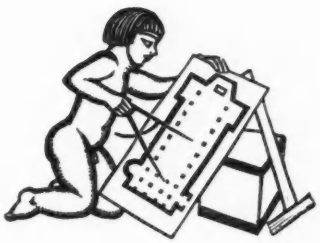
[*By courtesy of Dyckerhoff and Widmann, Wiesbaden, Biebrich.*

4. *FLAT-ARCHED BRIDGE OVER THE RIVER SPREE, AT ALT-SCHADOW.*

[*By courtesy of Christiani and Nielsen, Copenhagen.*

5. *BRIDGE AT PESEUX, FRANCE.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, SEPTEMBER 30, 1931

WAYSIDE BOXES

WE reproduce in the "Letters from Readers" pages of this issue a photograph of a police roadside box designed for the Leicestershire Constabulary.

The object of these boxes in country districts is to enable a police officer who is provided with a quick means of transport, usually a motor cycle, to use them as a call on his beat, which will cover a much wider area than at present. If the experiment is a success, several hundred such boxes will be required, and, as with telephone boxes, the choice is offered of either leaving their design to be a matter of local taste or of employing one design for general adaptation throughout the country—of mass-producing, in fact.

As opinion is divided over the merits of mass-production, let us examine its bearing upon this particular case.

The normal, though not necessarily the sensible procedure, regards the design of the box as the job of the authorities controlling the various police forces. There is no unified police force, although the same law is administered everywhere; therefore, as it became necessary to provide boxes, architectural departments here, there and everywhere, would be stirred to produce each a little building after its kind—each for the same set of conditions.

Once upon a time it would have fallen out that in stone counties little stone huts would have appeared by the wayside, in brick counties, brick, in wood-bearing counties, wood; and traditions of building, founded inevitably upon economic conditions, would have added another layer to the strata of unconscious local expression. Such variety of handling can no longer exist. Architectural assistants called upon to design cannot think naturally of local materials because locality plays only a minor part in the provision of building materials. If local materials are used, it is for effect, meretriciously, and with added expense.

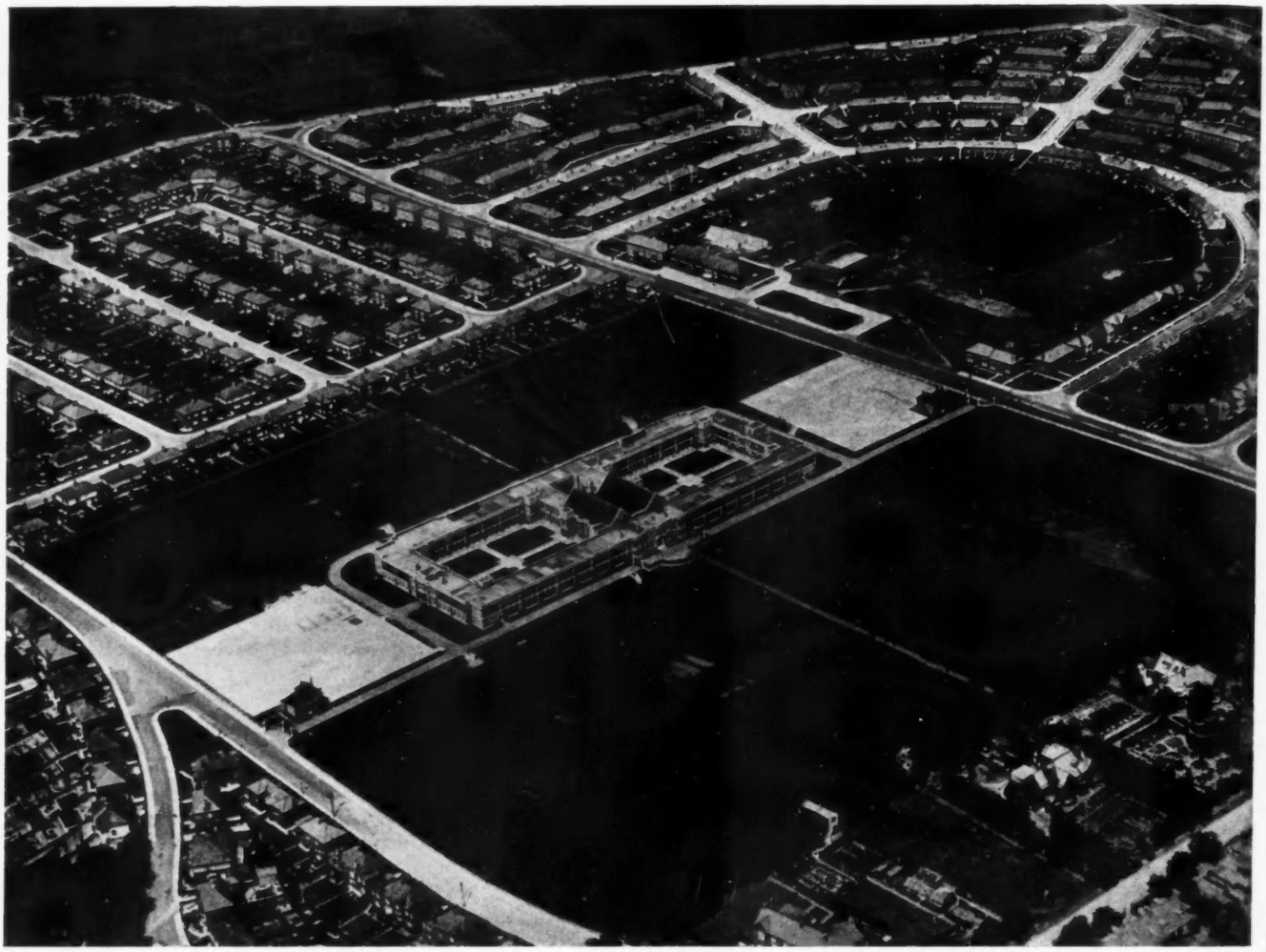
In point of fact, the normal result serves only to exhibit the varying degrees of personal competence and incompetence in materials that come from the four corners of the country, and even from overseas.

If, therefore, these boxes call for the use of non-local materials and the fulfilment of one and not many varying conditions, true economy is best served by employing one design used many times, the more so in that a travelling public must recognize the box for what it is before it can use it, whether it be in Devon or Norfolk. Now mass-production is useless if it means the incessant reproduction of anything, and we have only to look at motor cars and refrigerators to know that fine mass-production must be preceded by fine, exact thinking, the services of many second-rate brains being displaced by first-rate intelligence.

We do not properly understand the system as yet. Even the telephone boxes which so delight us could be finer in conception as mass-productions, and less expensive thereby. As it is, mass-production has enabled us to replace the clumsy efforts of many unthinking designers with the studied elegance of one trained mind.

The whole point of mass-production, if it is to be a blessing and not a curse, rests upon the conscious selection of the best models for reproduction in the most fitting materials. It is a process of what le Corbusier calls "high selection," and entails the employment of designers naturally sensitive to design, trained in the system of manufacture. The latter is very important, because freedom of manipulation is the outcome of understanding, and architects who don't understand the casting of concrete and iron, to take but two instances, cannot hope to use these materials to full advantage. It is largely because of this divorce of architect and manufacturer that we have suffered from the excesses of nineteenth-century mass-production: Birmingham and all its horrible progeny.

Birmingham was right when it recognized the system as part of modern economy, and we were wrong to look down upon it. The missing link was intelligent design, and this we can supply by conscious control of the design. To obtain this control, we must understand, and if necessary, evolve new methods of construction. Any other part we undertake to play will be as amateurs, unpaid.



A ZONED RESIDENTIAL AREA IN NORTHUMBERLAND

An aerial photograph of a housing estate in Northumberland. In *The North Tyneside Regional Report for 1931*, reviewed elsewhere in this issue, and from which the above illustration has been reproduced, it is rightly emphasized that zoning, or the allocation of particular areas to particular purposes, is one of the most important objects of town planning. The Committee dealing with this *Report* state that public open spaces have been proposed so as to provide areas for recreation in the proportion of one acre to every thousand of estimated population. An attempt has been made to site these open spaces so that no residential area is more than half a mile from an open space, and wherever possible advantage has been taken of natural parks and beauty spots, and places where, on account of the configuration of the ground, or for other reasons, the area is not likely to be used for building purposes.

NEWS & TOPICS

FARADAY'S LEGACY TO ARCHITECTURE

THE Faraday celebrations ended, it is time to wonder to what extent that great man's discoveries have influenced the forms of architecture. It is apparent at once that the researches which he and others of his day were about marked the first signs of a structural and mechanical revolution that has moved almost too quickly for us.

★

And if there is a moral to seek, it is this : that the practice of architecture is a variable thing, though the principles upon which it is founded are constant. The practice of architecture split into two, of which one was called engineering. But both were concerned with building, and both, in so far as either could be accounted beautiful, followed constant laws of harmony and proportion. The divorce which came about from the use of steel for building has beggared us doubly, leaving architects without the proper understanding of part of the structure of their building, and creating a profession of engineers with whom it has been no shame to disregard openly the clear call of proportion and beauty.

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There are obvious signs today that the gap between these two is closing—engineers are less satisfied to be manipulators of metal; architects less sure that architecture is a matter of making buildings that look like those their grandfathers made. When this gap is closed we will realize the true value of Faraday's discoveries.

THE A.A. IN VIENNA

Members of the A.A. who formed the party visiting Austria this year have just returned after a fortnight spent partly in Vienna and partly in a motor tour through some of the finest mountain scenery in Austria. In Vienna the great burst of building activity for the housing of the people, inaugurated by the socialist Burgomaster Seitz, has to a certain extent quieted down, though numerous great housing blocks are still going up. Illustrations of the Karl Marx Hof, the latest to be completed, have appeared in English papers, but no photographs can really do justice to its impressive scale. When it is considered that this great block of buildings is about a quarter of a mile long, it will be realized that the architects were faced with a great opportunity and a great responsibility, but throughout the whole scheme they have succeeded in making it look big without being oppressive; there is plenty of interest in the long façades of the wings and the central court, backed by six great arches, holding the whole thing together.

★

This feeling for scale occurs generally in all the modern work of Austria, and with it goes a love of refinement and a wise selection of ornament and colour, which relieves the big masses of any feeling of overpowering weight. One can be shown these schemes one after another till one gets slightly dizzy, but one only has to wander for an hour in the outskirts of the city through street after street of dull stucco, sham baroque façades of the nineteenth century, to have it brought home forcibly that the modern Austrian architect in this particular knows his job. Fortunately the housing blocks are typical.

★

When will the influence of Fischer von Erlach crop up again ? Not in our time, possibly, but when Europe settles down once more and money has a steady value the mantle of that great contemporary of Wren will surely descend upon someone, and architecture will become expressive of something more than sheer necessity.

THE PROGRESS OF LONDON HOUSE

It is encouraging to hear of the progress of London House, the projected hostel for students, especially Dominion students, studying at the University and hospitals of London. The site is to be in Bloomsbury, near the Foundling Hospital, and will eventually include the full appurtenances of a residential college—hall, library, common rooms, etc., and accommodation for 300 students. Many students in the past must have gone home with mixed feelings, having met too few English people of their own inclination of mind and too many landladies of a type produced only by large cities of shifting population.

ON A PEDESTAL

The grievances which are aired in the correspondence columns of the Press are not without their humour, but they constitute the section of a paper to which the curious-minded and reflective turn with expectation of instruction. I make no apology, therefore, for diverting my readers' attention to a matter that has agitated the columns of the JOURNAL for several weeks—the matter of a Pedestal Basin. The subject is prosaic, but it has a wider significance.

★

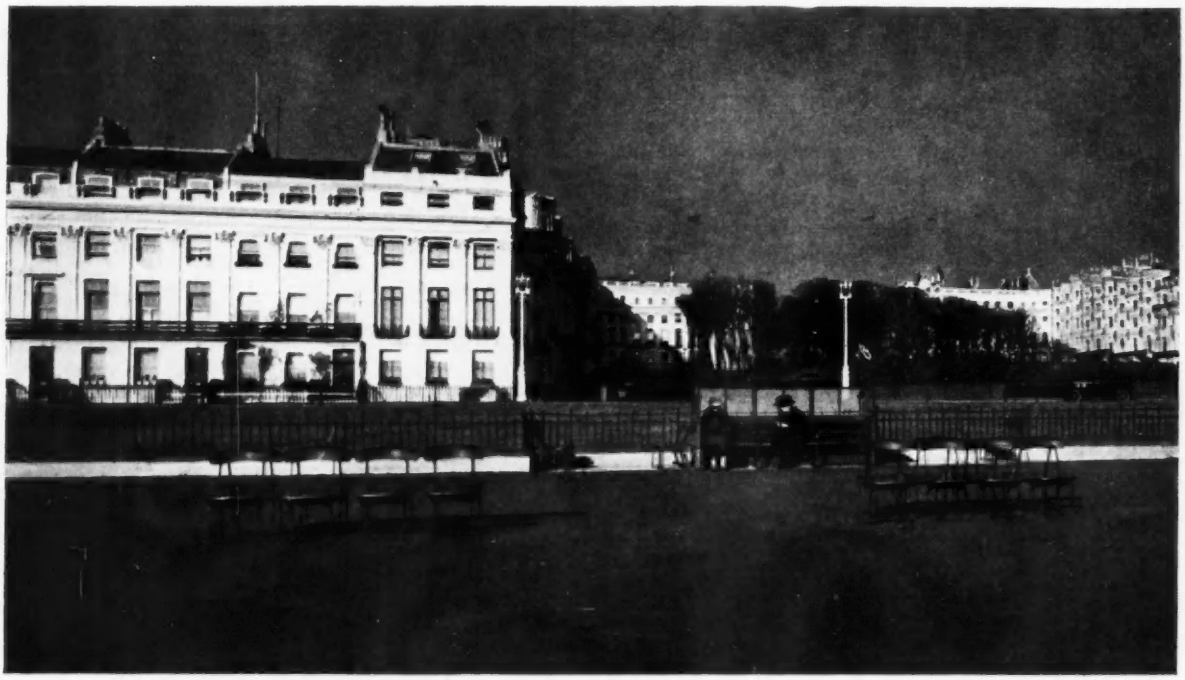
A correspondent chose, on his builder's advice, a certain lavatory basin supported on an earthenware pillar. He chose it expressly because he disliked the sight of pipes. On inspecting his house he was dismayed to find all the pipes boldly regimented outside the pillar, only to be informed that it was by no means practicable to carry them inside. On seeking the authoritative opinion of readers, he is no less surprised to find that the profession is very evenly divided on this question, the half supporting the recalcitrant plumber, the other half declaring categorically that any self-respecting pedestal would take the pipes and to spare. Thus, both he and his builder can retire from the battle with flags flying, even though I detect in his reply a certain apprehension as to the sanity of the building trade.

★

Now, which school of pedestal philosophy is in the right I need not here determine, but I will confess that this correspondent (who may be taken as any member of the public) has all my sympathy. I go farther. I say flatly that it is high time the sanitary engineers and manufacturers made up their minds once and for all on this very elementary question. The Prince of Wales, who takes an intelligent, as apart from a Royal, interest in the fortunes of our national industry, has made so bold as to say recently that it needs more than quality to sell our goods abroad. There is the question of appearance. As one might say in this case—we have got to come off our pedestal. It is not only the appearance of the thing; it is the most essential part of design which is here in question, —the fitness of the article for its purpose.

★

There was a time when the Englishman abroad was accustomed to use English sanitary fittings. There may be several reasons why such is no longer the case. The D.I.A. keeps reiterating that one reason at least is the lack of design, and in the matter of the Pedestal Basin it looks as if the D.I.A. were not far out. ASTRAGAL



A general view of the Square and Terrace, which has now stood unchanged for over a century, its destiny still regulated by the

BRUNSWICK SQUARE AND

How its Harmonious Design

IT is difficult to achieve a good layout, still harder to get your composition made visible by buildings which complete the harmony, and most difficult of all to ensure the continuance of such harmony, should you be fortunate enough to achieve it.

It is useful, therefore, to study examples of achievement in this last respect, and find out how it has been done. What has been done can be repeated, although in this matter we have almost to recapture a lost art of manners, if not of town planning.

Any visitor to Brighton and Hove is at once attracted by the well-mannered Georgian compositions, and astounded that a later age did not have the sense to complete the whole front in the same manner. That Brunswick Square and Terrace have retained their looks for over a century is due to the Brunswick Square and Terrace Act, 1830; which Act is now administered by the Hove Corporation. Portions of the preamble of the Act are interesting :

"Whereas a Square called Brunswick Square, and a Terrace and Place respectively called Brunswick Terrace and Brunswick Place, and Roads, Streets, and public Ways have been lately formed, and other Squares, Places, Roads, Streets, and public Ways are respectively in progress, and intended to be formed on Grounds late Parts of a Farm and Lands called the Wick Farm, situate in the Parish of Hove in the County of Sussex. . . . And whereas it is expedient that effectual Provision should be made for repairing and keeping in repair, improving, managing, and regulating the said Squares, Terrace, Places, Streets, and other public Ways so already formed and to be formed upon the said Grounds included and comprised within the Boundaries herein-after specified : And whereas it would contribute to the Benefit and Safety of the Persons now residing in Brunswick Square and on Brunswick Terrace respectively aforesaid, and the several Persons now being or who shall hereafter become Inhabitants of the several other Squares, Places, Streets, and other public Ways, or intended Squares, Streets, and other public Ways, comprised within the Boundaries aforesaid, and of the Persons who shall or may have Occasion to pass along the same Places, if Provisions were made for making paving, and keeping in repair the Footways before the said Houses, and for forming, making, stoning, gravelling, repairing, and keeping in repair the Carriageways, and also for lighting, watching, draining, watering and cleansing the same, and for removing and preventing Nuisances, Annoyances, and Encroachments thereon, and for other the Purposes herein-after mentioned. . . ."

Commissioners were appointed to carry out the purposes of the Act and were entitled to raise rates on the property to defray their expenses; the maximum rate in one year not to exceed 4s. in the £. The Commissioners were allowed to exonerate and release any poor householder or householders, or occupier or occupiers of any land, tenement, building or apartment, from the payment of all or any of the rate or rates to be assessed or imposed by virtue of this Act, for and during such time or times, and in such proportion or proportions, as the Commissioners shall think him, her, or them incapable of paying.

Section CXII is particularly interesting and is worth quoting in full :

"CXII. And for preserving an Uniformity of Appearance in the respective Fronts of the several Houses respectively erected and to be erected in Brunswick Square and Brunswick Place and on Brunswick Terrace respectively aforesaid, be it further enacted. That the several Areas in front of the several Houses respectively erected and to be erected in Brunswick Square and Brunswick Place and on Brunswick Terrace respectively aforesaid, shall at all Times hereafter, at the Costs and Charges of the several Proprietors of the said Houses respectively, be and remain inclosed with open Iron Palisadoes Four Feet high, let into a Stone Curb of Eight Inches by Six Inches, of the now existing Pattern, or of some other Pattern to be approved by the said Commissioners; and, at the like Costs and Charges,

original Act of Parliament, now administered by the Hove Corporation. Non-compliance involves a weekly fine of £2.

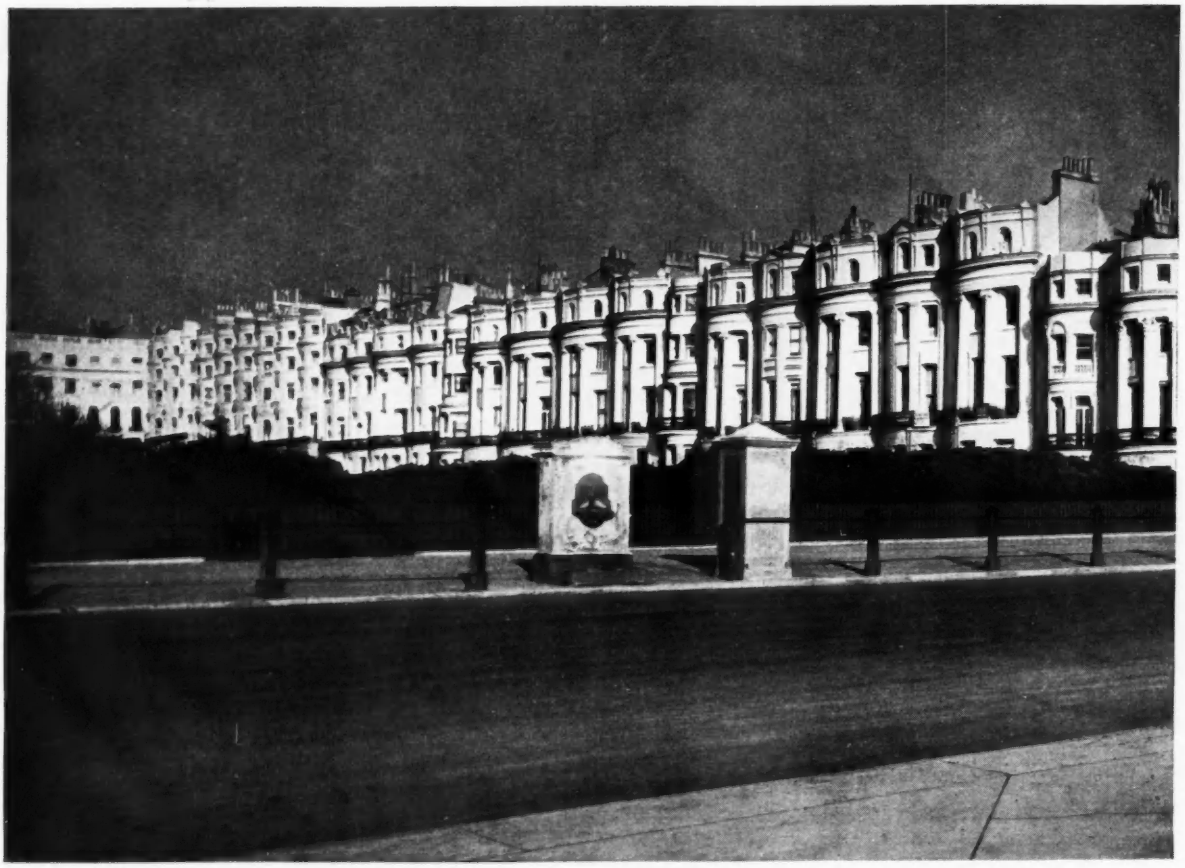
TERRACE, HOVE, SUSSEX

was Obtained and is Retained

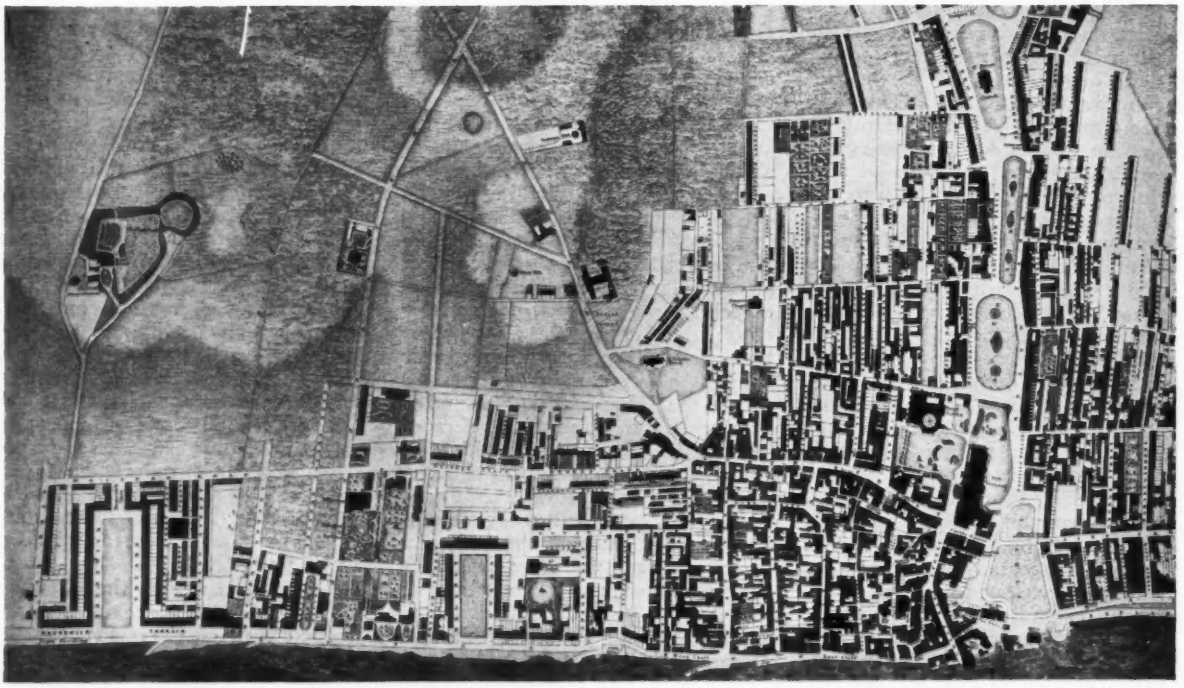
a Balcony shall be and remain erected and maintained at all Times hereafter in front of each Window on the Drawing-room Floor of the same several Houses, which said Balcony shall project not exceeding Two Feet from the Front of the said several Houses, and shall be surmounted by an Iron Railing of the now existing Pattern, or of some other Pattern to be approved by the said Commissioners; and no Viranda or other Projection (except such Balconies as aforesaid) shall at any Time be set up in front of any of the said respective Houses; but the present Front Elevations of the said several Houses shall at all Times hereafter be in all things maintained unaltered, and without Variation, and the Fronts of the same Houses, and the Chimney Shafts thereof respectively, be and remain covered with Parker's or Roman Cement, of one uniform Stone Colour; and in case any of the said Houses shall at any Time or Times hereafter be burnt down, destroyed, or damaged by Fire, the same shall, as soon as may be afterwards, at the like Costs and Charges, be rebuilt, or well and substantially repaired and amended, according to the original Plan and Elevation thereof, and the Front thereof be and remain covered with Parker's or Roman Cement, of one uniform Colour as aforesaid; and also that the respective Proprietors or Occupiers for the Time being of the said several Houses shall and do, at their respective proper Costs and Charges, at the End of every Three Years, to be computed from the Twenty-fifth Day of March One thousand eight hundred and twenty-nine, paint or cause to be painted the outside Woodwork and Ironwork in front of the said several and respective Houses and Premises with Two Coats of Paint in Oil at the least, and of such Colour or Colours as shall be ordered and directed by the said Commissioners; and that no Shop Window shall be made or set up, or any Sign Board, or other Notification of Trade, Business, or Calling whatsoever, shall be set up or affixed to or in any of the said Houses; and no Trade or Business whatsoever shall at any Time or Times hereafter be exercised or carried on in or upon any of the said Houses or Premises, or any Part thereof (except the Trade or Business of an Hotel Keeper in or upon the House being Number Forty-two on Brunswick Terrace aforesaid) or any other Calling or Employment be carried on or exercised to the Annoyance or Injury of any of the Houses or Premises adjoining; and further, that the Chimnies of any domestic Office or Offices, or other Buildings, now already built or hereafter to be built behind any of the said several Houses within the Distance of Ninety Feet, to be computed from the respective Fronts of the said Houses respectively, shall be carried up against the respective Bodies of the said Houses to the full Height of the respective Chimnies of the same Houses respectively; and every Person who shall act contrary to or in anywise deviate from or neglect to comply with any of the aforesaid Particulars or Provisions, and shall not, within Two Calendar Months after he shall be required so to do by the said Commissioners, remove, alter, amend, or otherwise supply such Contrariety, Deviation, or Neglect to the Satisfaction of the said Commissioners, shall forfeit the Sum of Two Pounds for every Week after the Expiration of the said Two Calendar Months during which such Offence shall continue; and it shall be lawful for the said Commissioners to order every such Contrariety, Deviation, or Neglect to be in all things removed, altered, amended, supplied, or otherwise, as the Case shall require, for the complete Observance of the said several Particulars and Provisions, at the Costs and Charges of the Proprietor or Proprietors of the House or Houses in respect of which such Contrariety, Deviation, or Neglect shall happen, to be recovered by Action of Debt in any of His Majesty's Courts of Record at Westminster."

Under this Section the Borough Surveyor of Hove still triennially issues a notice calling on the owners to paint the outside of their premises, according to the pattern prepared for the purpose, which may be inspected at the Town Hall.

G. L. P.



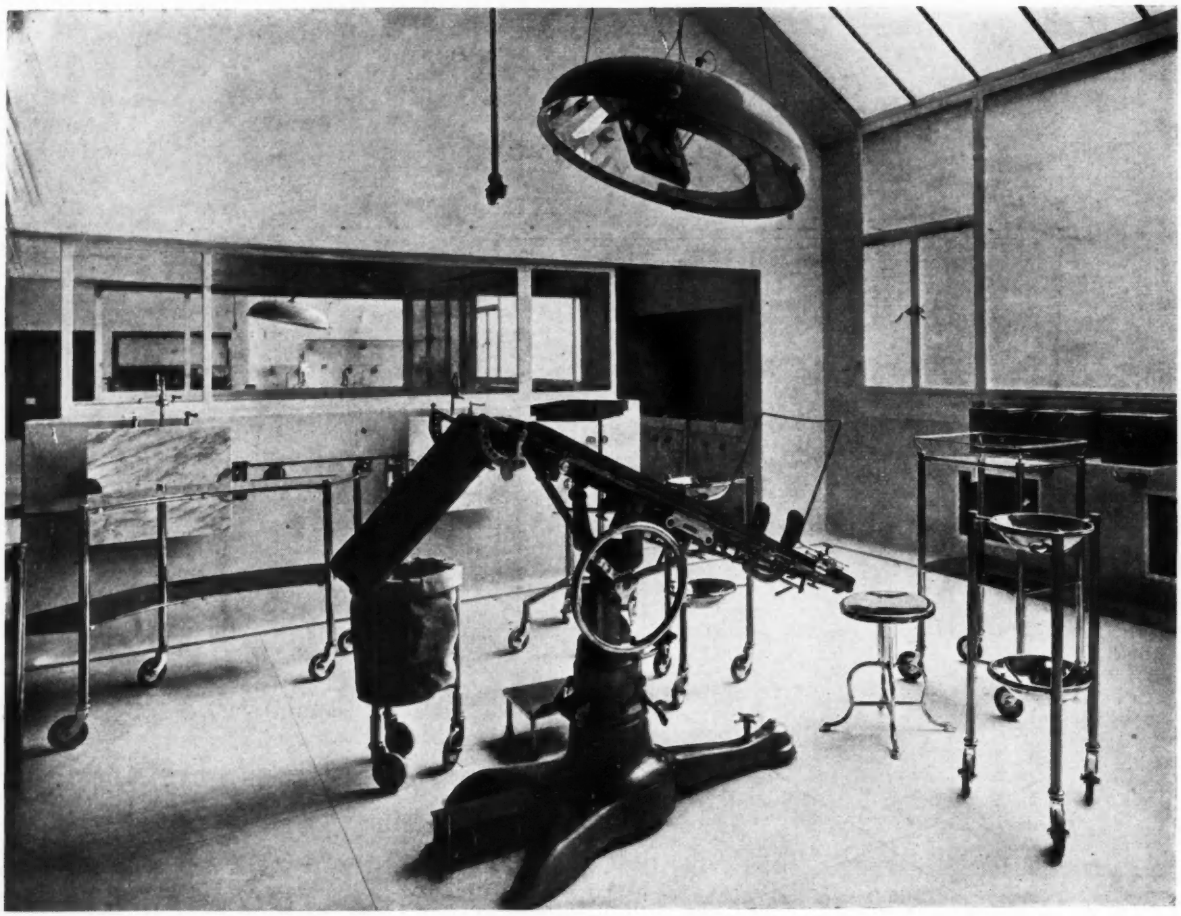
A nearer view of the Square, showing the "iron palisadoes" and the balcony, the design and proportions of which are very strictly defined in the section of the Act quoted in the accompanying article: "A Balcony shall be and remain erected and main-



Reproduction of a portion of a map of Hove and Brighton in Pre-Victorian days, when good manners in architecture, as in other matters, were valued. The plan of Brunswick Square and Terrace is seen on the left.

tained at all Times hereafter in front of each Window on the Drawing-room Floor of the same several Houses." "No Viranda," it is further provided, "or other Projection . . . . . shall at any time be set up in front of any of the said respective Houses."

The elevation of the west wing of the Terrace to the road and sea-front. "The present Front Elevations of the said several Houses," says the Act, "shall at all times hereafter be in all things maintained unaltered and without variation."



Looking from one operating theatre through the sink and sterilizing rooms into the other theatre. The equipment in each theatre includes an X-ray film-viewing box, Scialytic shadowless lamp with emergency lighting system, and power and lighting plugs.

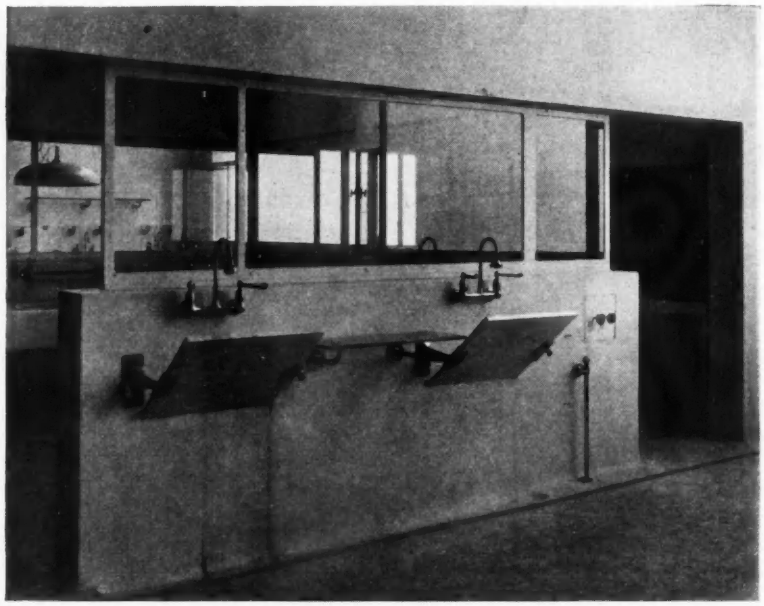
DUAL OPERATIONS UNIT AT A BARNET HOSPITAL

DESIGNED BY A. SAXON SNELL AND PHILLIPS

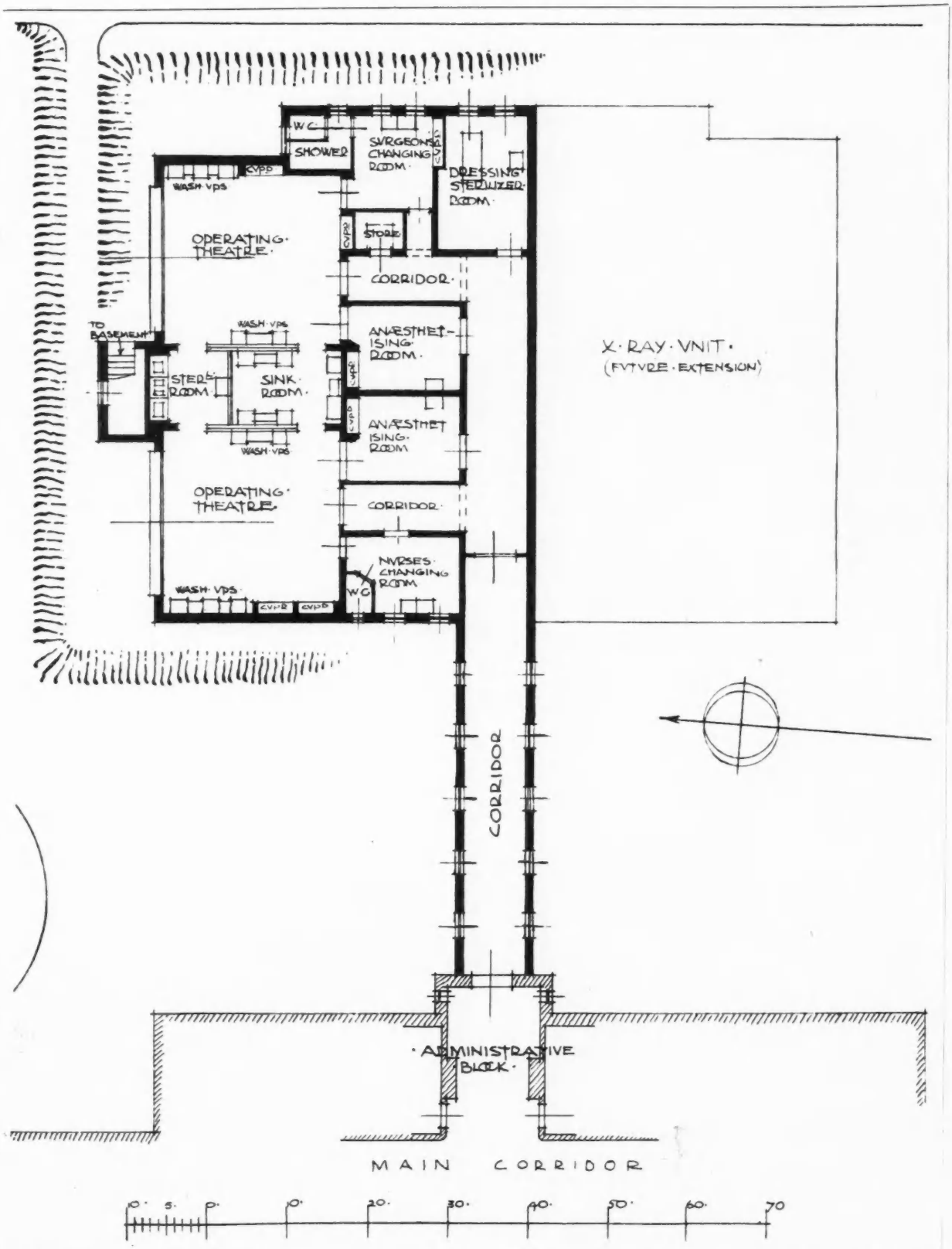
THE new operating department at Wellhouse Hospital, Barnet, is designed as part of a complete unit to incorporate operating, X-ray and electrical departments. At present only the operating department has been erected. The unit is in a central position. It is approached from the main corridor of the hospital and is one story in height, except for a small basement containing the heating and electrical apparatus.

Several new features are incorporated in the planning and equipment of the unit. A case in point is the design of the operating theatres and anæsthetising room. These are in duplicate, with the sink and sterilizing rooms for the common use of both, placed between the two theatres. The walls between the theatres and these rooms, and between the rooms themselves, have glass screens for ease of supervision.

The sink-room is fitted with various-sized sinks and has a chute for the discharge of soiled dressings, etc., over a bin in the basement, and there is a hatchway into the sterilizing room



Among the cleaning-up facilities for the surgeons and nurses in each operating theatre is an ingenious fitting, which ensures the hands being washed in running water.



Operations Unit: Wellhouse Hospital, Barnet.] [*By A. Saxon Snell & Phillips.*

Ground-floor plan. The unit has an operating theatre and anæsthetizing room planned in duplicate. Between the theatres and for their common use are the sink and sterilizing rooms. The corridors, anæsthetizing, sink and sterilizing rooms are top-lighted.

In the sterilizing equipment, the invention of Mr. E. W. Johnston, the chief engineer of King's College Hospital, London, the sterile water supply is automatic and sealed from contact with the air.

containing built-in bowl and instrument sterilizers. These are operated from inside, but the working parts are accessible only from the basement.

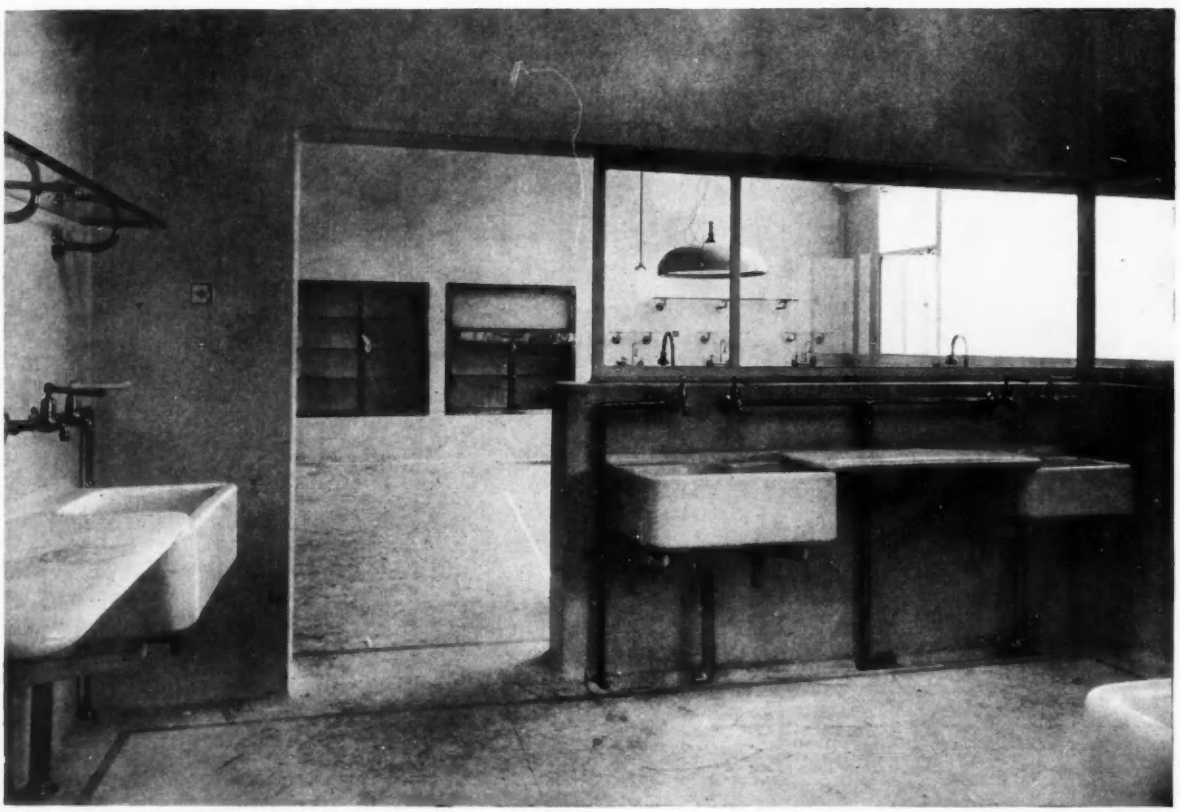
The dressings-sterilizer room, containing dressings and glove sterilizers, is at the end of the approach corridor, so that the sterilizer is available for ward as well as theatre purposes. A small store adjoins this room.

The sanitary and other equipment is of a very high standard both in appearance and efficiency, and includes some ingenious appliances such as the surgeons' hand "basins" and the sterilizing apparatus.

The latter embodies several original features which make it safe and convenient even for installation in the operating theatre itself. It provides an automatic supply of hot and cold sterile water, condensed from steam under pressure. It is the solution, long overdue, of the problem of extracting the steam vapour which is unavoidably present with all sterilizing equipments for operating theatres.

The corridors and changing rooms of the department are heated by radiators, and the theatres and remaining rooms, by panel heating.

Fresh-air ducts, to deliver air at any desired temperature, are provided in the theatres, and extract ventilation ducts are connected to openings in the ceilings of the theatres, sink and sterilizing rooms.



Operations Unit : Wellhouse Hospital, Barnet.] [*By A. Saxon Snell and Phillips.*

The sink room, like the sterilizing room, is planned between the two theatres and has glass screens for ease of supervision. It is fitted with various-sized sinks and a chute for the discharge of soiled dressings into the basement.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xix

FORGING AHEAD

BY KARSHISH

(H. B. CRESWELL)

I HAD not long set up an office in Nollingborough, where I slogged away at Garston's competition designs in the back room, while the big room cavernously yawned for the draughtsmen that were soon to occupy it, and Binger sat surreptitiously learning hymns in the front, when the heaven-sent bazaar began working its miracles. I had propitiated the fates by writing privately to my friends and acquaintances, telling them of my establishment in practice in the place, but the way commissions tumbled into my lap seemed to me then, as now, no less than miraculous; and I have, naturally, a vivid memory of the first miracle, particularly as it offered me the first chance I ever had of exercising to the full such architectural capacities as I possessed, for—as will have been noticed—my activities, up to this time, had been almost entirely limited to satisfying utilitarian needs of the crudest kind, and also because I have never since had a more embarrassing experience than on that sunny February morning in 1903, when a total stranger walked into my office and asked me to measure him for a house, as he might have asked a tailor to measure him for a suit of clothes.

I have to explain that Garston regarded his office in London as a studio rather than as a place of business, and, as he had no business, this was not so fantastic a notion as may appear. It was all in the picture, as we saw it, that, when at work in Charles Street, we wore French peasant's blouses which Garston had bought in some village in the Landes district, south of Bordeaux. They were of a dull, cherry-coloured canvas, delightfully smocked, and when we had taken off collars, coats and waistcoats, slipped our braces off our shoulders, and donned our blouses, we felt ready to slog till further orders—which was sometimes till two in the morning. I never felt keyed up for real work unless I was fully bloused, and I carried the custom to Nollingborough. Behold me, then, on that February morning, looking like a clown out of a circus, collarless, my braces looped like kicking-straps about my thighs, palettes of carefully rubbed-up colours before me, washing in a winter sky to a large perspective for Garston's current competition, when Binger, startled from his hymns into loss of all presence of mind, flung open the door and announced: "Sir Watkin Bennsan," in a voice like an orderly ushering the General.

I know no concentration more tense than that called for by the work I was then doing. I held a dozen things in my mind; the paper was damped exactly to my liking, and all was going well. To leave the drawing was impossible; I dared not even turn my head.

Bennsan, whose name I knew as that of the owner of a big estate in the neighbourhood, charged into the room like a bull into the arena, and the drawing, now hung in my office, records to this day my consternation at that moment. I blurted apologies and asked my visitor to find himself a chair. A vast, musical, bass voice behind me said pleasantly, in a tone that put me at ease: "Don't disturb yourself; I can wait." The speaker did not, however, seat himself but, as I was aware, amused himself with the drawings on the walls, and afterwards by looking on over my shoulder; but I took my time, and finished the job at leisure before I got off my stool to see a tall, grizzled, military-looking man, in riding cords and grey canvas leggings, and, had I known it, one of the best friends I was ever to have.

We sat to business. Bennsan explained that he called on the introduction of a Mrs. Robarts, who was a social acquaintance of mine. He was a little stiff in his manner, and tentative and hesitating in his talk. He led me, with perfect courtesy, but somewhat with the air of an elder man addressing a younger, to speak of myself and my doings; so that I began to wonder what he had come to see me for. Then, something cropped up in our conversation; there was an interchange of sallies of some sort, and suddenly his manner changed.

"The fact of the matter is," he said, "that I want an architect at once. I thought I should have to go to London for him, but our friend, Mrs. Robarts, told me of you—she has some of your sketches—and your name was known to me through another channel. I would, of course, much rather have a man on the spot. I know you won't let it go any farther, but I hardly myself knew I was going to build before I was besieged by persons recommending one or other of your rivals, here; even my gardener put in a word for someone or other, and two of your fraternity actually wrote and tendered for the work."

He went on to tell me that the building he had in view was a hunting-box for his sister, who had lately lost her husband, and who wanted to live in the neighbourhood. He then said that the "box" would have eight or ten bedrooms, besides servants' quarters and stables, and the question was: could the buildings be finished in time for the coming season, so that Mrs. Tavener, who had gone to Australia, could move in before the end of November?

It was a big undertaking, but I knew Farrar and Oldport would see me through, and I said, yes, that it could be done if he could instruct me, but that there would be no time to send sketches for approval to Australia.

"*That's* all right, then," said he. "Everything is left in my hands. There is one other question I have to ask. You must know that my sister is taking a lease of the house at a rent which is agreed, but which, it is also agreed, shall not be more than seven-and-a-half per cent. of the cost of the work; so, you see, I am tied pretty closely, both ways. Can you tell me what such a house will cost and what your own fees will amount to?"

"I can give you the approximate cost," I said, "when I have full particulars of what is wanted, and have made a sketch design. My own fees are five per cent. on the cost of the work."

He looked down his nose at this, and traced the carpet pattern with the point of his stick.

"Another architect in the place offered for three per cent.," he said.

I told him I had heard of an architect, in another town, who had publicly offered to work for nothing.

"How could he afford to do that?" Bennsan asked.

We looked at one another for a moment before my visitor again became attentive to the point of his stick.

"You say five per cent. is the customary charge?"

"Yes. It is generally recognized and is fixed by our representative body."

"How about extras—expenses?"

"I will give you a copy of the scale of charges; in such a case as this there need be no expenses."

He still did not seem satisfied.

"My fees must not stand between us," I said. "If, when all is done, you think I am being overpaid, I will accept a less sum."

"Fees not to exceed five per cent.—is that what you mean?"

"Yes."

"You will confirm it, of course?"

"Certainly."

My friend (as he was to become) never questioned my fees, which included an extra charge for surveying the site, but, instead, told me that he had formerly been at a loss to understand what architects did to earn their fees; but after seeing how I earned mine, he wondered how they got a living.

Since those days I have found an effective answer to clients who want to know what the exact amount of my fees will be, by telling them I shall be glad to do what they ask if they will say exactly what services they wish me to include for in my charge. When, as is usual, they cannot do this, I myself describe the services covered by the stated fee "for work not costing more than" so much; if they say what they require of me, they commonly make those requirements as small as possible, so that in either case I can name a fee which is as low as may be, and yet I cannot be called upon to do extraneous work without liberty to charge for it.

It is a satisfaction to be rigid in exacting due payment from people who try to avoid their obligations or are distrustful; just as it is unpleasant to be obliged to make extra charges to clients who are fair-minded. I may add, as a small contribution to the study of human nature, that the only trouble I have ever had in getting my fees paid has been with clients who, at the outset, were precise in fixing the amount of them beforehand.

One other indigestible fact Bennsan had to swallow; and I did not—as one is so much tempted to do—withhold the dose until after the sketch plans were approved, nor until the settlement of account, nor even altogether—on the assumption that he was aware of quantity surveyors' fees.

I reconciled him to the payment by explaining that the preparation of bills of quantities was part of the cost of the building; that the work had to be done by someone and paid for, and that building costs were reduced by the system of making one set of measurements serve all firms tendering, and had other advantages; and that the arrangement under which the architect supplied the bills, and was paid therefor by the builder, was usual in the provinces.

These preliminaries having been settled, Bennsan gave me exact particulars of "Quarle Paddox," as the youngest child of my T-square and dividers was to be called. I never built under happier conditions of getting instructions when I wanted them, and being allowed to do my work unimpeded; for, as the buildings were to meet, not Bennsan's own needs, but those of someone who was in the Antipodes, I had no prejudices or predilections to combat, and none of the obstructions which the natural anxieties and indecisions of clients throw in his architect's path. Bennsan was accustomed to look after his own estate, and was a clear-headed, experienced man of affairs; he was amenable to reason. I overflowed with reasons. Accordingly, I had things my own way, and everything progressed famously. It was, however, lucky for me that the plans of the house were settled before I tackled the stables, or Bennsan might not have accepted my judgment so readily. The stables were bigger than the house, and cost nearly as much: boxes for sixteen horses; stalls for four; with most complete and luxurious accessories, and quarters for a married head groom, and a kitchen, mess-room and dormitories for stablemen.

It was the first stable I had ever had to build. I arranged the buildings round a yard with a drive-in under the living quarters; and I was elated by the ingenuity of my contrivance—but I reckoned without my horse. When I was showing Bennsan the sketches, and was pointing out the glaring merits of my arrangements, he broke in:

"Yes, you know, but this won't do at all. If there was a fire it might be impossible to get the horses out; they, and men, too, perhaps, would be trapped. The doors of the stalls are wrong, also. A horse is always approached from the near side: you've got your doors on the off—that would never do; and the half-doors must be barred on the sunny side."

One memorable and joyous circumstance for which this house has always been endeared to me, is that in building it I was able to use a stone and a craft of building which belonged to the village—Earls Lawring—but which had long fallen into disuse. I have never seen similar stone nor similar ways of using it. The church was built of it, with imported dressings of Chilmark, and the older cottages in the village also; but otherwise the quarry, which was close to the site of the new house, had been drawn on only for metalling farm roads or building fence walls, for hundreds of years.

The stone was a hard, compact, white, crystalline lime-stone, and lay two feet below the surface in a bed composed of narrow, superimposed, uniform strata from two to five inches thick, separated by a film of shale, so that the face of the quarry itself looked like walling. The stone could be readily got with a pick, and dressed to a fair face with little waste, with a mason's cavil.

The traditional way of building with it was as coursed rubble laid dry—that is, with the mortar kept back from the face, as is the common usage in Westmorland. There was one old master of the craft in the village, and two proficient wallers whom Farrar and Oldport employed; and by various economies—using oak window-frames and mullions and doing without stone dressings, except at entrances and in chimney copings—I was able to get a tender for the whole—not including roads and fencing, but including terrace, entrance lodge and stables—within the limit of £17,000, which was the mark Bennsan set me.

With its weather-silvered oak, grey-milky walls, and mottled umber stone slates—which were like those seen in Oxfordshire and were to be got ten miles away—"Quarle Paddox" overlooks, from high ground, the valley of the Weddow, and it would be affectation if I did not confess that it is a source of pleasure to me whenever I see it, for such pleasures are the architect's reward when the disparity between his achievement and his aims allows.

I think my own satisfaction in the house is largely due to my having had to discard—for reasons of cost—a much more pretentious design; and to my realizing how much more happily the humbler traditional form fits the site and its surroundings. There was, I always felt, something repulsive in the arrogance of "Lawring Court," Bennsan's seat, which, with its Palladian frontage, stared the countryside out of countenance, from an eminence a mile distant, with cold, aloof grandeur.

All went smoothly till Farrar and Oldport were pressing on with the foundations of both stable and house, and copies of the drawings had been received in Australia; then the cables began to arrive, of which the saving grace (for me) was that it was impossible to make head or tail of them. The only news they conveyed was that, twelve thousand miles away, there was a brain-storm.

These cables—there were three of them in a week—were shown to me by Bennsan with gravity, but no signs of reciprocal consternation. Nothing could, however, be done until the promised — or threatened — letter arrived; and to stop the work, as one cable directed, would have stultified what we were all straining to accomplish. The letter duly arrived, and Bennsan brought it to my office. It was voluminous in disapproval, but scanty in defining any matters for objection; and close scrutiny made it seem that the lady had in part misread the plans and otherwise clearly overlooked consequences which necessarily flowed from the interferences she appeared to desire.

One change, to meet her ideas, was practicable; but when the question whether she wanted it made or not was set forth with great lucidity in a cable to her, the reply suggested either that we had misunderstood her letter

or Mrs. Tavener our cable, and as she had probably kept no copy of her letter, and could scarcely have remembered its contents, no other result was to be expected.

The position was hopeless; there was nothing to be done but press on with the work; and, though Bennsan showed me no more letters, I knew by the close way he questioned me, from time to time, that they continued to reach him, and that he was concerned to dispel his sister's apprehensions and sooth her distresses.

Thus, things went on right up to the time when the lady sailed for England. What would happen when she arrived I could not imagine! Bennsan warned me of the day of her arrival.

"You had better be on the spot," he said; and early on a certain Thursday afternoon, when the buildings had been finished and stove-dried, and nothing but the completion of the roads and certain fencing remained to be done, I dressed myself with care and, with terrible misgivings lest I should have to begin pulling the place down, cycled out to await the event.

Shortly before three, Bennsan, accompanied by a tall, graceful, beautiful and youthful woman, approached from Lawring Court through the strewn beech-leaves of the home park.

Mrs. Tavener was so radiant with enthusiasm that she scarcely looked at the house. She was delighted with everything before she had time to see it, and so grateful to me and anxious that I should know she was, that she could not wait while I explained that the dining-room was not the drawing-room, and that the butler's bedroom was not the game larder.

She was perfectly charming in her wish to show her pleasure in all that had been done; in fact this is the only occasion when the gratification of a client has been even more than I could wish.

The house, which was beautifully built, must have fitted her like a glove, for I never heard that anything was wrong with it; and though I sometimes met her socially, and was in after-years her guest, on occasions, she always spoke admiringly of Quarle Paddox, and never offered any criticism of its arrangements.

Before this house was finished I was busy with five other domestic jobs, none of which was, however, of the size or importance of Quarle Paddox, and the whole of them came to me directly, or indirectly, through that blessed old bazaar—that is to say, if it had not been for the bazaar they could scarcely have come my way. It is true that, profiting by the lesson of the bazaar, I had clapped a bit of ginger under the tail of destiny, and was rewarded no doubt by thus enlivening the jade. Of these devices, and of a great event which, again, grew out of the bazaar, I have next to tell.

NEXT WEEK—XX : AN ARCHITECT'S WIFE

The previous instalments appeared as follows :

May 27.	i :	I am Articled.
June 3.	ii :	Episodes of Pupilage.
June 10.	iii :	Episodes of Growth.
June 17.	iv :	My First Job: The Sewer.
June 24.	v :	My First Job: The "Pipes."
July 1.	vi :	I Turn Clerk of Works.
July 8.	vii :	Bradshaw & Son: Builders.
July 15.	viii :	Joe Richards: Foreman.
July 22.	ix :	Trials of a Clerk of Works.
July 29.	x :	A New Venture.
Aug. 5.	xi :	The Resident Architect.
Aug. 12.	xii :	An Architect's Early Gruel.
Aug. 19.	xiii :	An Uphill Fight.
Aug. 26.	xiv :	A Disaster.
Sept. 2.	xv :	The Law's Majesty.
Sept. 9.	xvi :	A Failure and a Success.
Sept. 16.	xvii :	Private Practice at Last.
Sept. 23.	xviii :	Provincial Practice.

LETTERS FROM READERS

A Standard Police Box

SIR,—I have recently been asked to design a police box for the general use in Leicestershire, and enclose a photograph of one of the boxes.

Such boxes are, of course, well known in the various cities and towns of this county, but, so far, are in the experimental stage in the villages.

The object of the boxes in the county districts is to enable a police officer who is provided with quick means of transport, usually a motor cycle, to use them as a place of call on his beat, which will cover a much wider area than on the present system. Each box is provided with a telephone for public use, and first-aid appliances.

If the experiment is a success, several hundreds of such boxes will be required, and my object in writing to you is to

A police box, designed by W. Keay, for the Leicester C.C. (See letter above.)

suggest that the "powers that be" should employ a first-rate man to design a box for general adaptation throughout the country, somewhat on the lines of those designed by Sir Giles Gilbert Scott.

This would seem to be preferable to every county adopting a design of its own, which might be good, bad or indifferent.

It would also be advantageous to the public to be able to recognize the boxes when passing from one county to another. WILLIAM KEAY

Art and Industry

SIR,—In raising the question of an international exhibition as a project for the consideration of Lord Gorrell's Committee, I clearly ran the risk of saying too much and yet not enough. The interest shown by your readers, both architects and laymen, tempts me to trespass again on your space in order to define the suggestion more clearly.

In the first place, I am well aware (as Mr. Gloag must know) of our present shortcomings. At the same time I hold with Mr. Basil Oliver and others that there is already rather more worth showing than is generally supposed, and that there is a great fund of insufficiently used talent to draw on. For instance, our motor-coaches are for the most part admirably designed, and the English easy chair is surely unsurpassed for comfort. Even in backward trades, such as pottery or lighting, here and there excellent work is to be found.

The point, however, I most wish to make is that none of us who have been discussing the scheme during the last year imagines that a worth-while exhibition can take place tomorrow. We cannot dispense with a careful step-by-step policy, in which we can feel our way, profit by mistakes, and give encouragement where it is needed. It is for that reason that I would recommend more use be made of the British Industries Fair, Building Exhibition and similar popular occasions, the Government giving the lead by selecting a "Quality" or "Design" exhibit, which would be an education both to consumer and producer.

I have no room to stress here the importance of having a competent and independent selective committee, nor to enlarge on the possibility of such exhibits forming the nucleus of travelling exhibitions. The main thing is to make a start and in ways that do not involve great expense.

The international exhibition would be a goal for all to aim at, making effort for the more immediate aims worth while, and an objective surely more inspiring than that of "tiding over bad times" or "making every economy." Nor, of course, is any exhibition really a goal in itself. Its purpose would be to inaugurate a finer standard of civilization in every way—in our homes and our clothes, in our cities and our countryside—and to assist in restoring our prosperity as a manufacturing nation by enhancing the prestige of our products.

In conclusion, I would emphasize that in exhibitions two qualities count most for success: boldness of vision and attention to detail. Then for a site I would say Hyde Park and not the derelict corpse of the White City; and for time, I would say, Begin to organize at once. NOEL CARRINGTON

The Pedestal Basin

SIR,—With reference to the letters from "N. C." in your issues for August 19 and September 16, I should like to point out that a fitting is on the market which has a loose base pedestal, the back being left out. This can be placed over the pipes after the basin is fixed, the latter being supported on concealed brackets. H. E. B.

Cavity Walls

SIR,—As you have not so far barred this subject, I would like to reply to "G. E. D.'s" letter which appeared in the JOURNAL for August 26.

There was no faulty construction in the house I instanced, but it was admittedly in a very exposed position. As to whether further precautions may have been needed in the case, I assume that "G. E. D." would not necessarily bar the use of bare sandfaced bricks if they were strongly preferred, nor insist upon the use of rough-cast, which many people abominate.

I do not understand why properly-built hollow walls, if a "sound form of construction," should be taboo on Dartmoor or elsewhere. Some of the cliffland on the south coast is probably fully as inclement as Dartmoor. Some years ago a really eminent architect—now dead—was greatly disillusioned when his 14-in. solid walls, built in cement and coated with rough-cast, on a cliff site, near Dover, failed to keep out driving rain, the rough-cast, by the way, being the best I have ever seen.

In my opinion, an ordinary hollow wall, if built properly under supervision, will stop driving rains, even on Dartmoor. For walls of unusual height the thickness of the work will naturally be increased. It is not generally known that the inner face of the outer skin of a hollow wall will *stream* with wet when it has reached the limit of saturation in a driving rain of long continuance. I, at any rate, am quite satisfied that the safest way of treating the base of the wall is to start the cavity from the foundation concrete, always provided the concrete is thoroughly good. Water can then disperse harmlessly, well below the floor level. It is hard to see anything but harm in raising by 1 ft. 6 ins. or 2 ft. the bottom of a cavity where water can and does accumulate. After all, the quantity of concrete introduced into a narrow cavity for that height makes no great difference either in the bearing of the wall or its substantiality.

W. BEESTON

Birmingham Bank Competition

SIR,—Living a great distance from London, I have just seen the JOURNAL for June 24. I read with great interest the letter of the Rev. E. Benson Perkins on the Birmingham Bank Competition, whose sentiments I wish to endorse most heartily. In mitigation, it must be considered that bank directors are not always most easily amenable to novel ideas in architecture. I can speak with feeling as the architect of several banks.

I would, however, draw the attention of Mr. Perkins to a much more serious case of the adherence to Classic tradition, approved by the R.I.B.A., and figuring in the same number of THE ARCHITECTS' JOURNAL on page 876.

The R.I.B.A. has published an admirably drawn-up programme for the competition for their new premises in Portland Place, and we all look forward to seeing the winning design an outstanding example of European architecture. It is to be hoped that the same criterion which governed the award of this year's medal for street architecture in Wales will not influence the elimination of designs which show originality and a modern conception of architecture, and the selection of a scheme compounded of seventeenth- and eighteenth-century models. Should this happen, I fear we will see public opinion bracketing the R.I.B.A. with the R.A. as the hidebound enemies of artistic progress. "EXILE"

Popular Lectures

SIR,—Although I am glad to hear that the R.I.B.A. and the Architectural Association are running a series of Saturday afternoon popular lectures, to be given by many prominent architects, I do feel it is a pity some of them coincide. For instance, on October 10, at the R.I.B.A., Mr. Clough Williams-Ellis is to speak on "Architecture—What's the Use?" and on the same afternoon Mr. Eric Jarrett, at the A.A., is to explain "The Building of a House." Again, on October 24, "Tendencies in very Modern Buildings" will be Mr. A. S. G. Butler's contribution to the R.I.B.A. series; and, at the A.A., Mr. Edward Maufe will discuss "The Furnishing and Decorating of a House." I do hope that in the future both institutions will collaborate when arranging lectures. K. W.

NEW FLATS IN CHELSEA

DESIGNED BY ELMS AND JUPP

A view of the Paultons Square front, looking towards King's Road. The left-hand entrance gives access to ten flats over the lock-up shops; the right to fourteen flats.

KING'S Road, Chelsea, a long and populous thoroughfare not far from the banks of the Thames, has suffered much rebuilding during the last few years. To an old inhabitant very little of the older property now seems to remain, and this apparently is doomed for early demolition. Chiefly the rebuilding has consisted of new shops and stores, housed in buildings of a more pretentious character than those they have displaced.

One of the latest newcomers is Paultons House, which stands at the eastern corner of Paultons Square, at its junction with King's Road. This building takes the form of two blocks of flats, planned under one roof and each having its own entrance staircase and lift from the square.

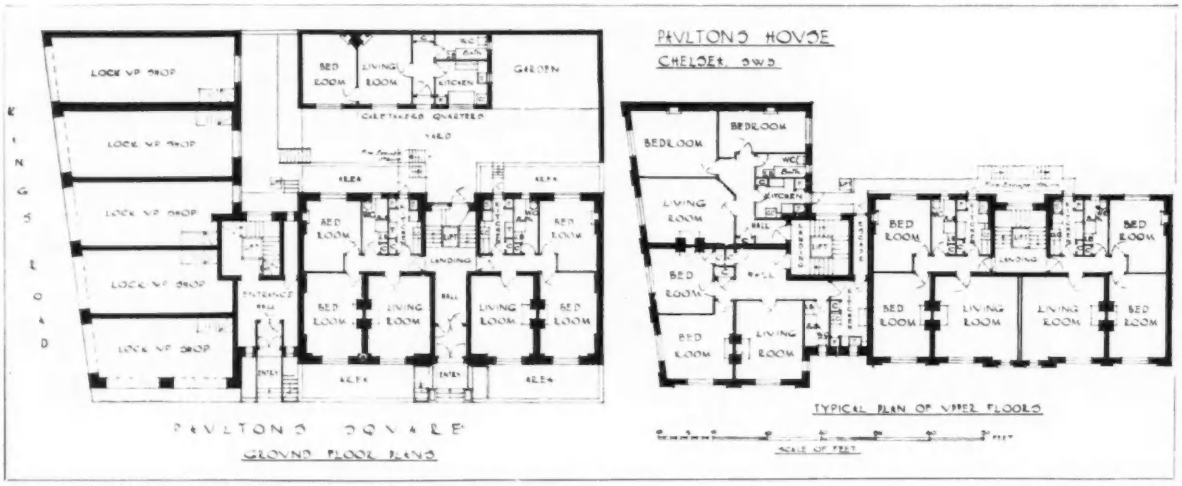
One block, beneath which are five lock-up shops with show-windows facing King's Road, accommodates ten flats; the other block fourteen flats. On every landing are two self-contained flats, each having a living-room, two bedrooms, kitchen and bathroom. Coal fires are installed in the living-rooms, the remainder of the rooms being fitted with gas fires. All the principal rooms are planned to overlook the main façades.

The flats in each block offer the same accommodation, but those in the King's Road end have rooms of a slightly larger area. At the rear of the building are the caretaker's quarters, providing a living-room, bedroom, kitchen and bathroom. Each block of flats is provided with means of escape in case of fire.

The exterior is faced with stock bricks of a pleasing texture, and has dressings of artificial stone. Metal windows, painted a royal blue, are fitted. The roof is of asphalt.

C

The King's Road (left) and the Paultons Square façades. The elevations are faced with stock bricks and have artificial stone dressings. The roof is of asphalt. Metal windows, painted a royal blue, are fitted.



Paultons House, Chelsea, S.W.] [*By Elms and Jupp.*

Plans of the ground floor and a typical upper floor. The building provides two blocks of flats and five lock-up shops. Two self-contained flats are provided on each landing, consisting of living-room, two bedrooms, kitchen and bathroom.

INTERIOR DECORATION

BY JOHN GLOAG

On this and the following page is printed the paper on "The Modern Movement in Design and its Effect on Home Decoration in the Future," read by Mr. John Gloag at the annual conference of the National Federation of Master Painters and Decorators of England and Wales, held at Newcastle-on-Tyne last week.

DECORATION cannot escape a close association with architecture. Before the attempt to consider in what direction interior decoration and furnishing are likely to develop, we must be familiar with contemporary developments in architecture and particularly with the new ideas of design that are changing the approach of the younger generation of architects to the problem of building houses that are fit to live in.

Two things have happened since the year 1880. First, there has been a structural revolution; this has changed the whole traditional method of putting up a building. Secondly, there has been a war; this has changed the whole traditional attitude towards the cost of building.

The structural revolution has made it possible to hang thin curtains of fabric over a steel skeleton. The wall which formerly enclosed and supported the building is no longer the dominating part of the structure. Buildings used to be like shell-fish, with all the hard, resisting structure carried externally. Now buildings are like vertebrates with an internal skeleton, which is the really important structural part of them, over which is stretched a skin, which is the wall.

The structural revolution has also made it possible to erect buildings very quickly. It has also helped to alter the point of view about the desirability of permanence: this is where the structural revolution begins to be associated with the new economic attitude towards the cost of building.

Counting-house Patronage

Today a site in a city or a suburb is acquired. So much money is to be invested in that site. Building upon it becomes a matter of investing so much money that will return so much interest in rent, and if it represents an adequate return on capital over a period of, say, fifty years, nobody has much interest in the building after that time as a building, and its replacement by something more profitable may be desirable from the economic point of view.

What may be termed the counting-house patronage of architecture favours impermanence in building, and the structural revolution has helped to make impermanence a safe reality. Hitherto, an impermanent building meant something blatantly temporary: something of wood, something uncomfortable, something that was often unsafe. Now a modern building, that is paying good interest on the capital invested in it—maybe an immense hotel or a huge block of flats—represents the architecture of the moment rather than the architecture of the future.

"Fitness for Purpose"

The economic situation following a prolonged period of organized destruction and waste, such as the war represented, has created an interest in functional fitness and has focussed a lot of attention on dealing very simply with architectural problems and with problems of house equipment. Before post-war stringency put a cutting edge on it, the cult of simplicity in furnishing and decoration and in domestic architecture had been rather self-conscious, not to say precious. When there was no money available for ornamental trimmings, a good many people, including a number of ardent young architects, discovered a virtue in simplicity.

"Fitness for purpose" was originally invented as a sort of antidote to ornamental congestion and design that had existed solely for the sake of decoration. In the hands of the modernist architects of Europe, who were compelled to practise austerities of design as a result of money shortage, and who were also experimenting with all kinds of new materials, "fitness for purpose" became in itself an end. Thereafter began the rise of what has been called functionalism. The results, among the bright young modernists, are very interesting. Here are some of them.

At the moment, functionalism is still in its noisy babyhood. It is making a tremendous lot of noise about something that is very obvious. It has dramatized the fact that anything that is made, or any room that is designed and equipped, must be fit for its job. Childlike, the more enthusiastic advocates of functionalism insist on scrapping everything that has been done before in the way of interior decoration and furnishing, and the logical development of their ideas is a little startling.

A Flat of 1960

One can visualize a flat of 1960 (always supposing that functionalism has not suffered a decline and fall); and in this flat one would expect to find two or three rooms, pleasant, airy, well-lit and efficient rather than comfortable. In the living-room, for example, I should expect to find a column about four feet in diameter ascending from the floor to the ceiling. Round this column at a convenient height would be a circular table. Above the table would be a little collar with different coloured buttons in it. A little bit higher, about the level of a man's eyes if he were sitting at the table, would be a series of dials. There would be a clock, a thermometer, a radio dial, a telephone dial and other dials concerned with the services with which this flat of the future would be connected. The whole of this fitting would be in polished rustless metal. The walls of the room would be of smooth glass, and by pressing any of the little coloured studs of the central column, the colour of the walls could be changed at will by concealed lighting, which would flood their glazed surface with the tone appropriate to the mood of the occupier. There would be an enormous range of these tones varying from a rich rosy hue, suitable for the young man or woman who had just fallen in love, to a deep dull blue reserved for quarter-days.

The advantages of being able to change the decoration of any room merely by light and by having glass walls is obvious and may conceivably be exploited in the future. Daylight would come into this room through a huge unbroken expanse of window which would occupy one wall completely. The window would, of course, be filled with glass that admitted a very high percentage of natural ultra-violet radiation. Heat would radiate from the lower part of the central column, the services column that has already been described.

Independent furniture would be confined to combinations of metal framework and flexible fabric; the finished humanized descendants of the early experimental steel chairs.

The bedroom would have a hammock-like apparatus in place of the old-fashioned bedstead, something that could be rolled up like a blind in the daytime and fitted into a slot in the wall. Everything would be standardized.

Austere Tidiness and Disciplined Home-life

Bathrooms would be all alike: convenient, luxurious, incapable of being rendered untidy by the splashing of even the most wilful wallower. In every apartment—and most people would probably have three rooms, bedroom, bathroom and living-room, for everybody would feed in restaurants—there would be a perfect adaptation of means to an end. Perfect tidiness: concealed well-ordered cupboards, where one's possessions were card-indexed. It is to this appalling condition of austere tidiness and disciplined

home-life that the functionalists, the bright young people of mod ernist architecture, are directing us. Fortunately, human beings insist on retaining their human likeness in spite of the mechanical conveniences that are periodically invented for them. The harsh doctrines of the present-day inhumanists will be softened when their application becomes general, when they are brought into contact with real life. All the violent experimental work that is being done today is very good for design, both in architecture and in decoration. It is shaking people out of that long, stuffy sleep in which they dreamed of nothing but styles.

It took the Greeks many centuries to humanize their structural ideas. They were working with stone. We are working with steel and with an infinite number of extremely tractable and intensely interesting materials.

The humanizing process should not take us so long : although one may be forgiven for believing that the functionalist flat of 1950 or 1960, which has been lightly sketched a few minutes ago, may become a horrible possibility. " Fitness for purpose " in itself is a negative creed. It is not enough. The homes of the future, like the homes of the past, must be made fit for humans to live in. They will be.

ARCHITECTURE AS A DEMOCRATIC ART

SIR BANISTER FLETCHER, PP.R.I.B.A., in a paper on the above subject, read at the twentieth annual conference of the British Commercial Gas Association, at Exeter, on Monday last, said : Architecture, of all the arts, was the most sensitive to the changing influences of time, place and material. It demanded the co-operation of the public in a greater degree than painting, or sculpture, or music. A genuine artist, if he was inwardly convinced of his genius, might produce masterpieces which, though they were derided in his own generation, would be admired in the next. A musician might compose symphonies which only he recognized as divine. But an architect could not build churches for which there were no worshippers, or houses which no one would live in. It was for this reason that architecture provided a visual history of the shifting fancies and ideals of mankind. The comparison between a Roman amphitheatre and a Gothic cathedral, between a Renaissance palace and an American skyscraper of steel and concrete, revealed, as nothing else could do, a revolution in the social habits of Western man. All successful architecture, whether it took the form of a mediæval fortress or a modern railway station, was an expression of the ideas and aspirations of its time and country for everyone to see. That was why Bishop Creighton said that " architecture is the most democratic of the arts : it goes literally into the market-place, it is for everybody, and rich and poor alike may enjoy it."

He agreed with that saying, but he thought there was another sense in which architecture today might be regarded as a democratic art. It was true that any labourer of æsthetic inclinations could look on St. Paul's without stint; but if he was forced to live in a squalid slum, he would probably reflect that the pleasures of architecture were strictly limited.

He thought that architecture, as an expression of true democracy, must be found in the homes of the people, and especially of the townspeople, as the spread of education and the improvement of material conditions made them discontented with the ugliness of our meaner streets. It was the concern of the architect today to see that not only " the stately homes of England," but her cottages and tenements as well, should show the influence of the English tradition in domestic architecture.

The Opportunities of Today

As in the past ten years, there would for some time to come be great opportunities for the domestic architect to erect houses which, whilst they were thoroughly modern in point of labour-saving and hygiene, did not detract from the pleasantness of the region in which they were set, but add something to its natural beauty.

The post-war housing shortage, the general demand for small and easily-managed homes, and the southward movement of industry which was a feature of our times, had led to immense schemes of town-planning, which would have been inconceivable before the war. Two months ago the King and Queen visited a thriving town in Essex which ten years ago was an expanse of green fields without a single cottage. The Great Fire, which left half of London in ruins, gave Sir Christopher Wren the opportunity of putting his designs into practice. The housing needs of the present day, if the parallel was not too exaggerated, afforded us a similar chance of profiting by the mistakes of the past. They put a responsibility on the whole community.

The Mistakes of the Past

Some years ago, in speaking before the International Congress of Architects, he pleaded that architecture should be given a more prominent place in general education. For the public at large were the patrons of architecture; and as an English statesman said after the passing of the Reform Bill : " We must educate our masters." Unless there was a genuine widespread desire for better architecture in the new homes that were now being built, we should repeat the mistakes of the past. " With a knowledge of architecture," he once said, " each street is a picture gallery which everyone may enter." Yet some of the poorer streets of English towns were only rogues' galleries.

In nineteenth-century England, when the " Battle of Styles " was being fought among revivalist architects, the grim streets of our industrial towns, built without regard to comfort, durability, or grace, were spreading on every side without proper guidance as the need arose and as builders began to realize the commercial possibilities of the results of mass production. The dwellers in these houses, though they might complain bitterly of the inconvenience to which they were exposed, were gradually inured to ugliness and even came to regard it as natural.

There was much truth in the saying that if you could not get what you liked, you would be forced to like what you got. Fortunately, with the undeniable improvement in general social conditions, a new spirit had grown up of intolerance towards unsightliness, discomfort and cheap pretence in domestic architecture.

Artists and Town Planning

For such developments were fraught with obvious dangers. The new opportunities for economy, convenience and beauty brought with them new opportunities for their opposites. Parliament had proposed to confer upon all councils the power to control the " elevations " of buildings as well as their material, without any evidence that those bodies were competent to decide upon such matters. It was therefore encouraging to see such proof of strong public feeling as Sir William Llewellyn's letter to the Prime Minister, which suggested that " men of artistic vision and experience " should be consulted by the local authorities, not only on the elevation of buildings, but on all matters on which planning would affect the looks of the region.

He was glad to say that many of the most important town-planning committees referred all their building plans to the joint advisory panels of the C.P.R.E. and the R.I.B.A. It was a healthy sign of the times that the expansion of our towns should be controlled in this way. Architecture could be considered a democratic art only when the desire for pleasant surroundings was satisfied in the homes of the poor as well as of the rich, and when the convenience of the cottager was studied in relation to the appliances which modern invention had made possible in every house, large or small.

Sir Banister then discussed the question of how far the use of gas met the needs of today as regards labour saving in the house and how it might best be applied.

THE SPECIFICATION WRITER

Electric Light in Architecture

BY R. W. MAITLAND AND HOWARD ROBERTSON[1]

THE architect today is conscious of the importance of artificial light as a contribution to the final effect of the interior, also of the fact that the light source is effectively controlled when housed in the structure; and as a consequence he is finding that considerable forethought is required in considering the lighting at an early stage in his design.

In the past, little consideration was given to lighting during the design and in the process of construction; the electrical contractors were generally called in after completion to instal the various fittings, with the result that little or no effect was produced other than the provision of so many footcandles. The aim of modern lighting is to eliminate the excessive use of small suspended light sources, and to distribute the light over comparatively large areas, with a resultant low surface brightness. To this new viewpoint the 1925 Exhibition at Paris made a substantial contribution. It marked the final breakaway from the converted gas candelabra and suspended fittings which were found by the artist to be inadequate to meet his requirements; and, due to the efficiency and flexibility of the modern gas-filled lamp, the arrangement of light sources with safety and convenience in any position in the interior became a practical possibility.

The engineer, as a result, has found himself faced with the task of setting aside his ideas of lighting in terms of footcandles only, and is now obliged to consider quality of light at least as much as quantity. He must be in a position to inform the architect of the different qualities of the diffusing and reflecting media available, of the position of the various light sources, also of the size and position of the reflecting equipment, so that the architect may leave sufficient space in his structure to house them.

During the past few years many architectural lighting designs have been executed in Europe. One is conscious that lighting is also being introduced into buildings as a novelty, with a resultant tendency to create unrest in interiors and exteriors; but this is a passing phase inseparable from experiment.

[1] Extracts from a paper read at a recent session of the International Illumination Congress.

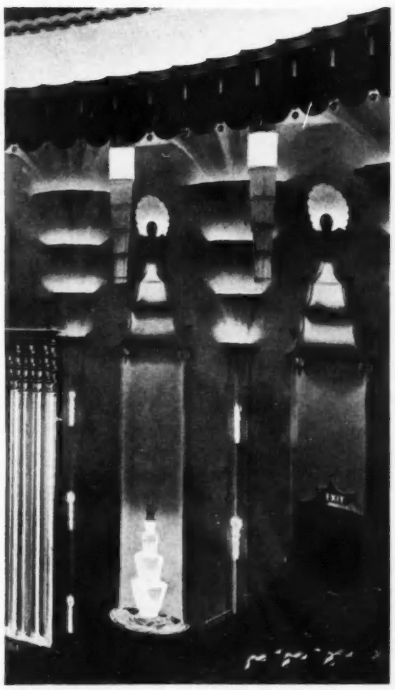
We are concerned with two definite principles in lighting :

1 : Light as an illuminant.

2 : Light as a combined illuminant and element of decoration.

In the former case, the utmost simplicity is desirable, an intimate and discreet incorporation in the architectural form. This branch of lighting demands the greatest technique, and is the most difficult to handle. The best examples of this kind are perhaps found in the employment of indirect lighting.

The second form of lighting, where the elements are in themselves decorative, and stressed as such, gives infinite scope to the designer. The old-fashioned crystal chandelier was an important architectural element in the eighteenth century, and it is possible that modern fittings of today will play a similar function; but danger lies in confusion of thought as regards the precise purpose of the fitting. Frequently fittings of this type used for purposes of illumination are inefficient through too great a fantasy and extravagance of form and design, and fittings primarily designed for decoration are not given a suitable architectural setting. The solution is for the architect to visualise his lighting elements in the initial stages of his design.



New Victoria Cinema, London. [*By W. E. Trent and E. Walmsley Lewis.*

"One is conscious that lighting is being introduced into buildings as a novelty."

We have yet to reach satisfaction in respect of well-designed and practical fittings for domestic rooms, offices, shops, etc., and it is easier to find amusing decorative fittings than simple and functional fittings.

INDIRECT LIGHTING

The question of placing the light sources in relation to other parts of an interior is naturally one involving many factors. It is often held that where indirect light covers the whole surface of the ceiling it tends to produce a dull effect and makes interiors appear flat, and that additional direct light sources could well be introduced to give more vitality. This is perfectly true, but, if indirect light is correctly applied, it is suggested that this phenomenon could be overcome. For instance, if the unit be so localised that the area of light is confined to a definite area, this being a good deal less than the total ceiling area, the light source assumes a more directional character; at the same time the soft and pleasing quality of the indirect lighting system is retained, and greater scope is also given in the designing of the ceiling itself.

Another method of lighting with the indirect system is that of introducing floor standards incorporating the necessary reflecting equipment, and arranged to harmonize with interior design. This method has not, until recently, been extensively used in this country, but Sweden, Denmark, France and the United States of America offer examples. It has the advantage of a good wide distribution and general diffusion, but is apt to suffer from monotony and requires local assistance. It is felt that, if the design of the interior were more definitely designed for diffused light, this phenomenon would be overcome, and this system has interesting possibilities in the incorporation of the lighting source in wall recesses, in furniture, etc., particularly in hotel and domestic interiors.

SEMI-INDIRECT LIGHTING

This system offers endless possibilities, and is well illustrated by the glass cornice. Here, again, the lighting should be controlled and confined as regards the lighting area. The glass should be of a good diffusing quality, and may well provide interest in its design. Certain makes of Italian, French and English glass are interesting from this point of view; they are dense and not too opaque, and have good diffusing properties. It is suggested that the best effect is obtained in this case when the direct light is of less intensity than the light contributed by the indirect lighting. In a continuous cornice the points of light are sometimes covered with darker glass.

Strand Palace Hotel, London, W.C.] [*By Oliver P. Bernard.*

"The field of combined direct and indirect lighting has, up to the present, only been partially explored ; one point is clear, however, namely, that wherever indirect lighting is employed it should have an intimate connection with the architectural form."

DIRECT LIGHTING

This system may be divided into two types :

1 : *Shielded Lamp.*

Laylight, or suspended glass panels. (Lamps behind diffused glass.)

2 : *Exposed Lamp.*

a : Pear-shaped lamp.

b : Tubular lamp.

Shielded Lamp.

A criticism of large numbers of the fittings at present available under the first heading is that they are either æsthetically unsatisfactory or else too fragile and complicated in their construction; improvement on this score is, however, gradually being effected.

One of the most recent departures in modern fittings design, which is being followed to a considerable extent in this country, comprises the use of glass tubes in the form of suspended glass panels, as used at the Trocadero Restaurant. The effect is similar to that of prismatic glass, which diffuses the light source over the glass area and has comparatively good efficiency. A similar effect is obtained from an Italian glass which is made in sheet form or in the form of a drum, and with which it is possible to obtain a uniform brightness over the glass surface without a great loss of efficiency.

Exposed Lamp.

a : Ordinary bare lamps, arranged in clusters to form fittings, are sometimes used, but such a method requires the lamps to be placed well out of the line of vision so as to avoid the excessive brightness of the exposed lamp. The inability to control the light effectively gives a limited scope of application to this method.

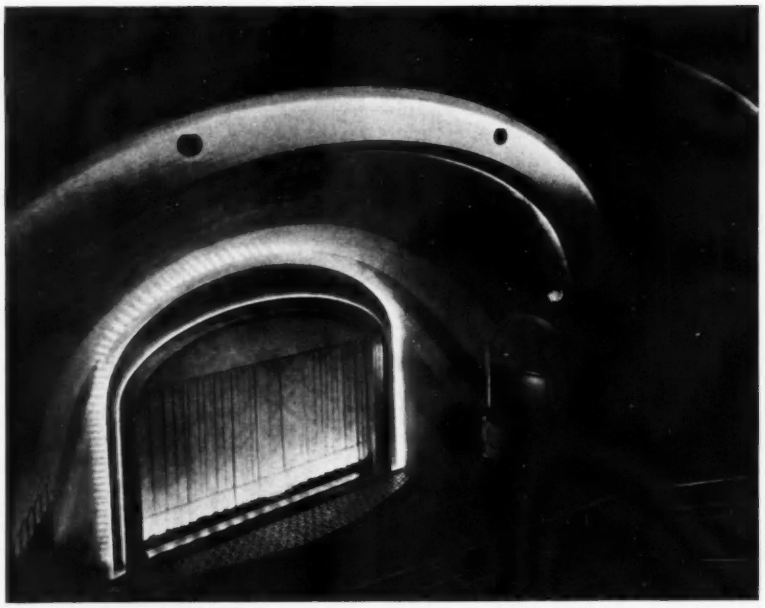
b : The tubular incandescent lamp can be used, the most successful examples being found in the opalescent type, since their brightness is not excessive. The possibility of grouping a number of these lamps in the form of a decorative design or making use of them for vertical and horizontal lines of light is extensive, and the increase in their use in this country is noticeable.

DIRECT AND INDIRECT

This method of lighting has many advantages, one of which is that it enables the two systems to be separately controlled. An excellent example of this was found in the original Salle Pleyel, Paris, where the ceiling was lit by powerful flood lights from the floor. The ceiling itself has star-shaped openings, and lights are projected through these apertures to the floor. Further, the effect of arranging these two systems side by side makes it possible to produce an interesting change in the quality of light.

The field of combined direct and indirect lighting has, up to the present, only been partially explored; one point is clear, however, namely, that wherever indirect lighting is employed it should have an intimate connection with the architectural form.

We have yet much to study in respect of the question of indirect lighting from an economic and utilitarian standpoint, for this system has the advantage of possessing a quality of light that is both pleasing and restful. There are also many other possibilities, one of which is the architectural importance of arranging the lighting between one room and another so that an effect of continuity is obtained. This question has, up to the present day, received little consideration. Climaxes, contrasts and harmonies are all possible; and to this end it will be necessary for the architect to collaborate with the engineer and to prepare ensemble-illumination-studies of his design on the



Cambridge Theatre, London, W.1.] [*By Wimperis, Simpson, and Guthrie.*

"Another important consideration, not yet fully explored, is the effect of acoustic forms necessary for theatres . . . . these do not necessarily result in shapes well adapted to successful lighting, to achieve which it may be reasonable to break up the ceiling in such a manner that the whole surface may be lit through successive steppings."

Berkeley Hotel, London, W.1] [*By Stanley Hall, and Easton and Robertson.*

"The possibility of grouping a number of tubular lamps in the form of a decorative design or making use of them for vertical and horizontal lines of light is extensive, and the increase in their use in this country is noticeable."

same basis as ensemble-studies for decoration. These studies are rarely made by the architect today, who is lacking in the necessary technique and data.

Another point in modern lighting which has not yet been fully explored is that of procuring a sense of separation between one room and another.

The simplest form of separation is found where different intensities of light are used between one room and another, or by the difference in colour, an example of which is to be found at the Mayfair Hotel in the adjoining ballroom and reception room.

In every case of this kind it is important to consider the approaches and connections so that, on leaving one apartment, there is a sense of adequate preparation for what is to come. The effect is primarily a psychological one and constitutes an architectural aim in itself.

Another important consideration, not yet fully explored, is the effect of acoustic forms necessary for theatres, cinemas, concert halls and buildings of a similar type; these do not necessarily result in shapes well adapted to successful lighting, to achieve which it may be reasonable to break up the ceiling in such a manner that the whole surface may be lit through successive steppings. The various materials employed for the purpose of sound reflection and absorption are also important factors to the architect and lighting engineer.

EXTERIOR LIGHTING

Exterior lighting may be considered under three headings :

1 : Floodlighting.

2 : Illuminated windows, lighting from the inside.

3 : Applied lighting in the form of applied boxes or screens.

1 : Floodlighting.

Floodlighting is generally applied to buildings in two ways; either the façade is totally floodlighted to present a daylight appearance, or else only portions of the façade are floodlighted. Up to the present day, only the actual question of securing the necessary illumination has been considered, and many installations suffer from careless placing of the units. They are frequently insufficiently concealed, or provided for, and for this reason the daylight appearance of the installation is often unsightly.

When floodlighting is considered as part of the general scheme of the building, it will be found that two methods are generally adopted, one where the floods are concealed in a portion of the building itself, as at Olympia, the other where each unit is housed in a specially designed decorative sconce on the building face, similar to that at Drages, in Oxford Street. It is, however, very necessary that the elements and modelling of the building front should be designed in such a manner that the necessary light and shade will produce an effect, and this effect must be visualized and should not be an after-thought.

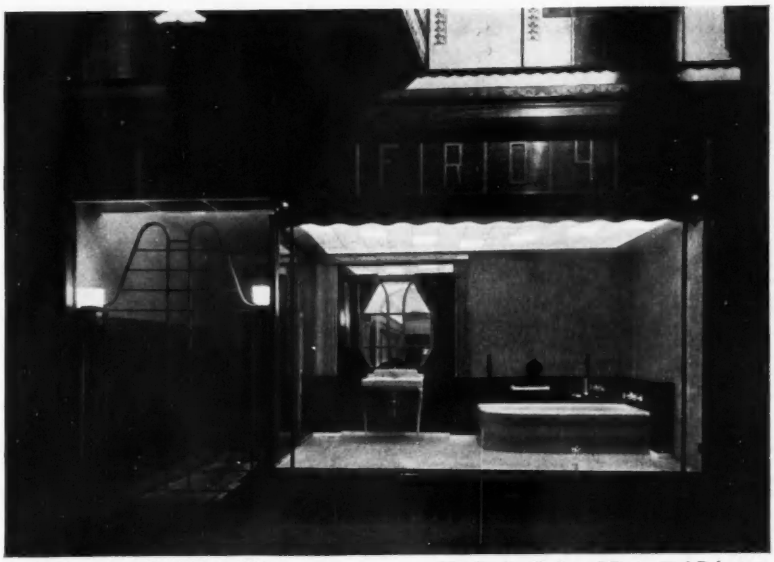
It is suggested that the concentration of floodlighting on the upper attics of a building, etc., where architectural interest is not justified as a general rule, does not show the possibilities of floodlighting to the best advantage.

2 : Illuminated Windows

The use of light projected from the inside to illuminate the windows or walls of the building has extensive possibilities. They have an advertising value to the cinema owner, the shop-keeper and restaurant proprietor, etc.

3 : Applied Lighting in the Form of Boxes

In this method, boxes in the form of panels are introduced on the building face forming part of the general design of the façade. They require careful designing if the daylight appearance is not to be unsatisfactory.



Froy's Showrooms, Bond Street, W.] [*By Stanley Hall, and Easton and Robertson.*

"The use of light projected from the inside to illuminate the windows or walls of the building has extensive possibilities. Examples of this kind are to be seen in England, and have an advertising value to the cinema owner, the shop-keeper, etc."

LITERATURE

THREE PLANNING REPORTS

THE passing of the Town Planning Act on April 9, 1925, imposed the duty on the Council of every borough or urban district with a population of over 20,000 of preparing a town-planning scheme. This scheme was to be submitted to the Ministry of Health before January 1, 1929. The Local Government Act of 1929, however, extended the time until January, 1934, and in certain cases a still further extension up to December 31, 1938, was allowed for.

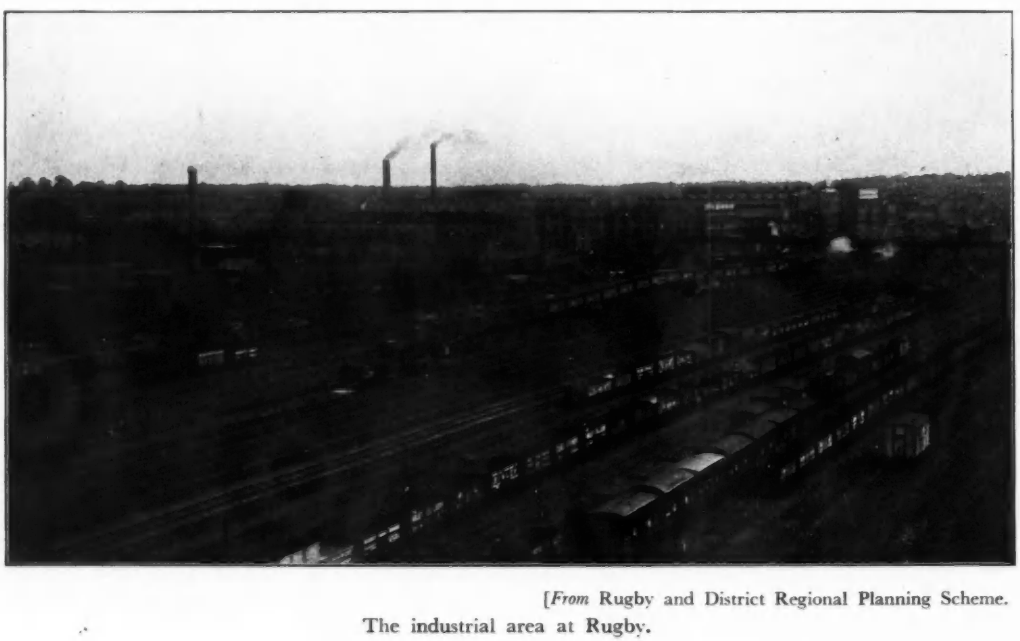
One of the worst features of post-war land development has been the uncontrolled exploitation of small estates by speculators whose only aim is to develop their holding intensively, and then to disappear with the profits. Regional planning and zoning seeks to control such haphazard methods, and by taking long views to reserve areas for garden cities and satellite towns which shall become, in time, assets rather than liabilities to the present town.

These three reports are typical of three different aspects of regional planning. One is a seaside borough, one a highly industrialized area, and one a typical provincial town. Each has its own particular problem to work out and its own special evils to guard against.

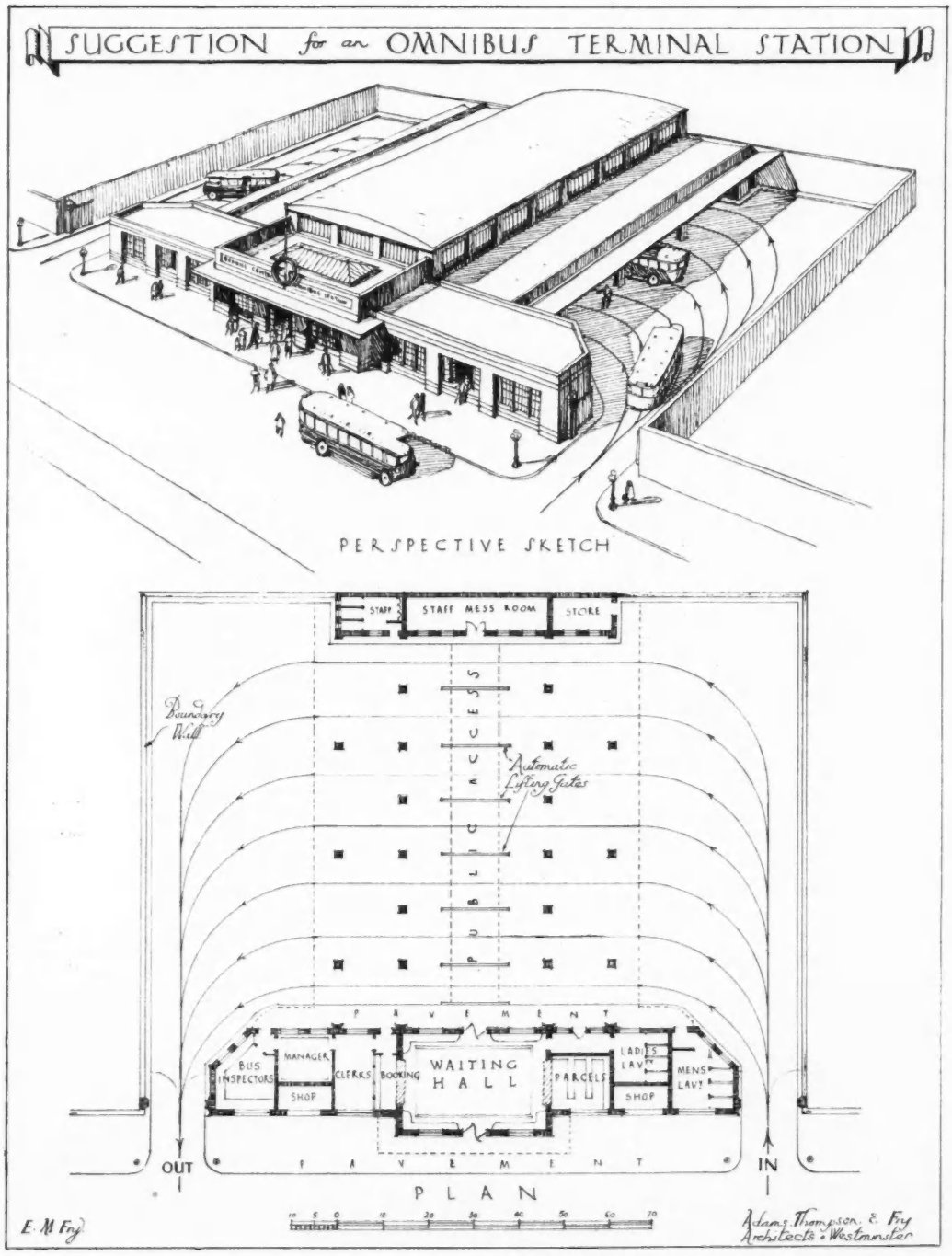
The Borough of Bexhill has laid down a programme for the development of a town whose main source of prosperity depends upon the attraction and entertainment of visitors. The focal point of the scheme is the sea front, with a swimming pool, bandstand, and concert hall. The immediate area behind these is reserved exclusively for hotels, boarding and apartment houses; the residential district is still further removed from the sea behind the railway, a peculiarly awkward feature which cuts the town in half from east to west. All this residential area has been zoned, the density of the houses being regulated by the style already existing in different districts. It is proposed to combine the railway stations, and group in the neighbourhood the civic and main shopping centre. The road proposals are excellent, the aim of the report being to provide easy access to the town, at the same time avoiding unnecessary through traffic, and to this end the main Southampton–Dover road by-passes the town. The importance of the motor coach traffic is not overlooked, and a proper coach station is included, though one trusts that regulations will be made to keep both these and the local motor-bus services away from the sea front. The Committee have reserved large tracts of "sea levels" to east and west as agricultural land and have provided for the extension of the esplanade up to the golf course. The amenities are thus, it seems, adequately secured. Some of the designs of proposed seats, shelters and ornamental features could be improved, and one hopes never to see in being the lamp-posts here illustrated.

To leave the "Sunny South Coast" for the North Tyneside Regional Planning Scheme is to enter a sterner world. The area under consideration comprises the city of Newcastle, three boroughs, nine urban districts and one large rural district, in all, nearly two hundred square miles of the most highly industrialized district of Northumberland. The Tyne forms the southern boundary, and it is clear that here the question of paramount importance is one of communications. The report sets out a very comprehensive list of recommendations for new arterial roads, and the widening of those existing to cope with heavy commercial vehicles. The crossings of the river have been carefully considered, for the south Tyneside is also an industrial area. The cost of great bridges is enormous, and suggestions on this head are not lightly made. The new bridge proposed to be thrown across the river at St. Anthony's will cost nearly one million pounds to complete. The area under consideration being so large, it has not been thought advisable to do more than indicate the various zoned areas allocated to residential and industrial districts, but the Committee wisely recommends that the proportion of open spaces shall be one acre to every 1,000 inhabitants, and has so placed these open spaces that no residential area is more than half-a-mile from a recreational space.

The Rugby Report comprises the Rugby Urban District and two rural districts, including some 113 square miles of typical English countryside. The population is largely agricultural, the only industries of any size being in Rugby itself. The town-planning has,



[*From* Rugby and District Regional Planning Scheme.
The industrial area at Rugby.



[*From* Borough of Bexhill General Development Plan, 1930.

An indispensable feature of a modern seaside resort: the omnibus terminal station.

therefore, been confined to the immediate neighbourhood of the town, where a density of twelve houses to the acre is the highest allowed. The proposal to treat the whole rural district as an agricultural zone is a bold step, but undoubtedly a right one, for this will prevent the exploitation of bungalows and shacks. The only large road in the district is from Coventry to Daventry, but as road traffic may increase, the road proposals are chiefly concerned with safeguarding routes which, in the future, may become important.

One of the best sections of this excellent report deals with the preservation of amenities. A learned judge has defined amenities as "pleasant circumstances or features," and the photographs show that this part of Warwickshire is rich in such features. The report urges local authorities to make full use of their powers in controlling advertisements and filling stations, to preserve existing trees and to carry out the no less necessary duty of planting new trees by the sides of the arterial roads. A sense of humour enlivens this book and some of the

photographs might be used for a "Cautionary Guide to Rugby" if the Joint Town Planning Committee had not already shown themselves awake to these horrors in issuing this report.

The Rugby authorities suggest a standard of open spaces of at least five acres per 1,000 of the population, as compared with the one acre per 1,000 of the Tyneside report. Coombe Abbey Park, lying on the extreme western boundary of the region, is recommended to be retained as an open space. If such a spot, so near to the town of Coventry, were allowed to be exploited for building, it would be a disaster, and it is to be hoped that the Coventry scheme for town-planning will be pushed on, for the park is nearer to that city than to Rugby.

All the reports are illustrated with good maps, plans and photographs.

LL. E. W.

The Borough of Bexhill General Development Plan, 1930. By Adams, Thompson and Fry. Bexhill: The Town Clerk. Price 10s. 6d. net. (post free).
The North Tyneside Regional Town Planning Scheme, 1931. Report of the North Tyneside Joint Town Planning Committee. Newcastle-upon-Tyne: The City Engineer. Price 7s. 6d.
The Rugby and District Regional Planning Scheme, 1931. By Adams, Thompson and Fry. Rugby: D. E. Biart, Benn Buildings. Price 10s. 6d. net.

SOUTH WALES ARCHITECTS' YEAR BOOK

THE *Annual Report of the South Wales Institute of Architects for the Year 1931–32*, recently issued, marks the forty-first year of its publication. It has been edited by Mr. Ivor P. Jones, A.R.I.B.A., the hon. secretary. The membership of the Institute now totals 282, made up of the following: Central branch, 165 members; Western branch, 80 members; Eastern branch, 37 members.

Mr. T. Alwyn Lloyd, F.R.I.B.A., the Past President, in an address given at the conclusion of his year of office (1930–1931), printed in the *Report*, states that it had for some time been his hope that means might be found for establishing a travelling studentship for competition, annually or biennially, among their younger members. It seemed to him to be the one thing lacking in their training of young architects. Speaking from his own experience, he knew of nothing that would be of greater benefit to the student at the end of his course, or to the assistant recently started on his office career, than the opportunity of three or four weeks' sojourn abroad for the purpose of architectural study. He suggested that they should consider utilizing some of their funds, or make an appeal to members and friends of the Institute, to enable a travelling studentship of a modest sum to be awarded.

The book also contains an article on the R.I.B.A. South Wales Architecture Medal and a photograph of the building, selected by the jury as the best in South Wales for the years 1928–30; annual reports of the three branches and a complete list of their members; suggestions governing professional conduct and practice; scale of professional charges; quantities for small jobs; and a photograph of the President, Mr. J. Herbert Jones, F.R.I.B.A., accompanied by a brief description of his career.

Forty-first Annual Report of the South Wales Institute of Architects, 1931–32. Edited by Ivor P. Jones, A.R.I.B.A. Cardiff: Western Mail and Echo, Ltd.

QUESTIONS THAT ARISE

French Polishing

W. H. writes: "*I should be pleased to have your expert's advice regarding the best treatment for the oak-work of a shop-front. My experience in the past has been to have such work french polished and then given a coat of best quality copal varnish. I was strongly advised by a shopfitter, however, not to cover with varnish as it would be necessary, at some future date, to scrape off the varnish and repolish, whereas polishing every year would be a better and more economical treatment. The polished work, after less than three months, is becoming bare and discoloured in places, where subject to friction when washing windows, etc. Building operations have been going on, and dust, etc., may possibly have played a large part in impairing the condition of the polished oak, but I am of the opinion that varnishing after polishing would at least be the best treatment for the lower part of the oak front.*"

There is no question but that a good hard varnish finish is much more durable than french polish: but the latter would last much longer than is generally the case today if it were done in several operations, and well bodied up to provide a good hard film of shellac (the objection of too brilliant a gloss can always be overcome by cutting down to wax polish finish).

French polish, however, is bound to succumb to heat and damp, and a better, though rather more costly, method is to varnish on open grain. Several coats must be applied, each well rubbed down when hard. French polishing every year keeps a front smart, but it is seldom that the surfaces are properly prepared, which is essential to durability; then, again, the best shellac is no longer obtainable for polishes, and that means the quality is not what it was.

J. C. R.

Defects in a House

F. F. C. writes: "*A client of mine recently purchased a house which now shows defects, and is anxious to know whether he has sufficient grounds for legal action against the seller or builder, or both. Briefly, the case is as follows: My client purchased his house about two years ago (immediately after the building had been completed) from a utility building society.*

The house is semi-detached, and contains six bedrooms, with bathroom and w.c. My client recently found a persistent smell of dampness around the entrance hall, and on removing the linoleum he found the flooring boards in a partly-decayed condition. He investigated further and lifted one of the flooring boards, when he discovered that no concrete had been laid over the site, and that the soil under the floor was saturated with water. He attributes the saturation to a down pipe on the wall just outside, which had not been connected to the drains, but discharges into a sump at the base of the wall. The building society had no employed architect, and my client would, therefore, like to know if he can legally compel the society or the builder to make good the defects. Personally, I consider that he has no case for action; but I would be glad to have your expert's opinion on the matter."

It does not appear from the facts that the purchaser inspected the house before he entered into the contract.

A purchaser is not bound to inspect the property before entering into a contract, but if he does not do so he purchases the property at his peril and he cannot rescind the contract upon discovering defects that he might have found if he had inspected the property.

The principle of law as expressed by the words *caveat emptor*—let the buyer beware—applies to the sale of land.

The terms expressed in the contract might throw valuable light as to the rights of the purchaser to obtain compensation if the defects could not have been ascertained by inspection, but as the contract is not before me it is impossible to express a final opinion on the rights of the purchaser, although *prima facie* it appears that the purchaser has no remedy.

The purchaser would be well advised to consult his solicitor with regard to the construction of the contract and upon the other matters set forth in this answer.

E. F. I.

Publications Received

From Pyramid to Skyscraper. By H. Bellis. World of Youth Series. No. 7. London: C. A. Watts & Co., Ltd. Price 1s. 6d. net.

North-East Coast Countryside Electrical Development. By C. Holmes Waghorn. Newcastle-upon-Tyne Electric Supply Co., Ltd.

COMPETITIONS OPEN

September 30.—Sending-in day. New Central Library, Birkenhead. Limited to architects who have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1930. Assessor: Andrew N. Prentice, F.R.I.B.A. Premiums: £250, £175 and £100. Conditions were obtainable from E. W. Tame, Town Clerk, Town Clerk's Office, Birkenhead. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars were obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit £1 1s.)

October 1.—Sending-in day. (Last day for conditions was June 3.) Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars were obtainable from the Secretary, 62 Woodhouse Lane, Leeds.

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions, etc., obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

SOCIETIES AND INSTITUTIONS

EXHIBITION OF TOWN-PLANNING DRAWINGS

AN exhibition of town-planning drawings is now being held in the R.I.B.A. Galleries. They include the whole of the British section of the recent exhibition held in Berlin during the Congress of the International Federation of Housing and Town Planning.

In addition to the British section, there are a few examples of work now being done in other countries.

The exhibition is open daily between the hours of 10 a.m. and 7 p.m., until Saturday, October 3, on which day the hours will be 10 a.m. to 5 p.m.

ARCHIBALD DAWNAY SCHOLARSHIPS

In accordance with the terms of the will of the late Sir Archibald Dawnay, the R.I.B.A. have awarded one scholarship of £75 for the academical year 1931–1932 to Mr. J. R. Baxter, of the Liverpool School of Architecture, University of Liverpool, and one scholarship of £50 for the academical year 1931–1932 to Mr. D. L. Couves, of the School of Architecture, Armstrong College (University of Durham), Newcastle-upon-Tyne. The work submitted by Mr. R. L. Banks, of the School of Architecture, the Architectural Association, London, and Mr. R. A. Smeeton, of the Birmingham School of Architecture, was highly commended.

Mr. J. A. Pinckheard, of the Department of Architecture, Surveying and Building of the Northern Polytechnic, London, N., who was awarded a scholarship of £75, and Mr. Arthur Roberts, of the Liverpool School of Architecture, University of Liverpool, who was awarded a scholarship of £50, both for the academical year 1930–1931, have been granted renewals of their scholarships for the year 1931–1932.

The scholarships are intended to foster the advanced study of construction and the improvement generally of constructional methods and materials and their influence on design.

MANCHESTER ARCHITECTS' VISIT

The Manchester Society of Architects paid an evening visit on Wednesday, September 16, to St. Paul's Church and Rectory, Blackley, Manchester. The church, which is designed by Messrs. Taylor and Young, members of the Society, is one of many required by the huge new housing estates around Manchester. It is still unfinished, but in a state most interesting to the professional visitor.

THE ARCHITECTS' DIARY

WEDNESDAY, SEPTEMBER 30

R.I.B.A., 9 Conduit Street, W.1. Exhibition of drawings, including the whole of the British Section of the recent exhibition held in Berlin during the Congress of the International Federation of Housing and Town Planning 10 a.m. to 7 p.m. (Saturday 10 a.m. to 5 p.m.) Until October 3.

BRITISH COMMERCIAL GAS ASSOCIATION. Annual Conference to be held at Exeter. (Last Day.)

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow.

SATURDAY, OCTOBER 3

Sunrise, 7.2 a.m. Sunset, 6.37 p.m.

MONDAY, OCTOBER 5

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First General Meeting of the Session.

BARTLETT SCHOOL OF ARCHITECTURE, University College, Gower Street, W.C.1. Commencement of New Session.

TUESDAY, OCTOBER 6

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. Council Meeting, followed by "The Great Decorative Artists—Past and Present." By Major A. A. Longden, D.S.O.

FRIDAY, OCTOBER 9

TOWN PLANNING INSTITUTE. Annual Country Meeting to be held at Bristol. Until October 11.

SATURDAY, OCTOBER 10

Sunrise, 6.14 a.m. Sunset, 5.22 p.m.

R.I.B.A., 9 Conduit Street, W.1. First of four non-technical lectures. "Architecture—What's the Use?" By Clough Williams-Ellis, F.R.I.B.A. Chairman: The Rt. Hon. Lord Riddell, HON. A.R.I.B.A. **3 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First of five non-technical lectures on Present-day Architecture: "The Building of a House." By Eric R. Jarrett, A.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 13

KING'S COLLEGE, Strand, W.C.2. First of nine public lectures on Gothic Art. "The Nature of Gothic." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

THURSDAY, OCTOBER 15

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. First of six lectures on "The History of English Architecture—XIIth Century." By Herbert Mansford. **7.30 p.m.**

FRIDAY, OCTOBER 16

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Council Meeting, 3 p.m. General Meeting; President's Address, 6.15 p.m. **3 p.m.**

SATURDAY, OCTOBER 17

Sunrise, 6.24 a.m. Sunset, 5.6 p.m.

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Manchester. "Modern Interior Decoration." By John M. Holmes.

R.I.B.A., 9 Conduit Street, W.1. Second of four non-technical lectures. "Some Opinions Upon Furniture and Decoration." By H. S. Goodhart-Rendel, F.R.I.B.A. Chairman: D. S. MacColl, M.A., HON. A.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. Annual Dinner, to be held in the Empire Rooms, Trocadero Restaurant, Piccadilly Circus, W.1.

KING'S COLLEGE, Strand, W.C.2. Second of nine public lectures on Gothic Art. "English Transitional and Early Gothic." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTE OF FUEL. At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. Presidential address by Sir Hugo Hirst, BT. **6 p.m.**

WEDNESDAY, OCTOBER 21

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Housing and town planning tour to Manchester and Liverpool. Departure to Manchester from Euston at 6.5 p.m.

INSTITUTE OF FUEL. Annual Dinner and Dance, to be held at the Connaught Rooms, Great Queen Street, W.C.2. Sir Hugo Hirst, BT., will preside. 6.45 for 7.15 p.m. **7.15 p.m.**

THURSDAY, OCTOBER 22

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At Town Hall, Manchester. Lecture dealing with the activities of the Corporation with regard to housing, etc. 10 a.m. Luncheon (by invitation of the Corporation). 12.45 p.m. Tour of slum areas, housing estates and town-planning roads. 2 p.m. Reception in the City Art Gallery. 5 p.m. **10 a.m.**

FRIDAY, OCTOBER 23

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At Municipal Buildings, Liverpool. Address by the Chairman of the Housing Committee on the work of the Liverpool Housing Committee. 10.30 a.m. Visit to Springwood Estate. 12 noon. Luncheon at Childwall. 1 p.m. Visit to housing estates. 2.30 p.m. **10.30 a.m.**

LAW REPORT

DRAINAGE WHICH AFFECTED AN ESTATE

Hatton v. *Barclays Bank, Ltd. Chancery Division. Before Mr. Justice Farwell*

THIS was an action by Mrs. Marjorie E. Hatton, for rescission of a contract to purchase from the defendants, the trustees under the marriage settlement of Captain and Mrs. Lubbock, certain property known as Mere House, Hamble, near Southampton, for the sum of £8,000.

Captain and Mrs. Lubbock were the owners of the property, and the plaintiff alleged that she was induced by the misrepresentations of Captain Lubbock as to the local drainage scheme to pay a deposit of £800 on the purchase price of the property for £8,000. Mrs. Hatton's case was that the misrepresentations were made in a personal interview. She now alleged that the drainage system, which the local authority had installed, affected the amenities of the property.

Defendants, in their defence, denied misrepresentations, or if made, that they in any way influenced Mrs. Hatton's decision to purchase the property. They claimed specific performance of the contract which the plaintiff had entered into. In the alternative, they asked for a declaration that they had a lien on the property.

His lordship, after hearing the evidence, granted Mrs. Hatton a rescission of the contract with costs, and ordered the return of her deposit. The defendants' counter-claim he dismissed with costs.

In giving judgment, his lordship said the dispute was an unfortunate one, as it apparently arose through a perfectly honest mistake between the parties. It was a regrettable misunderstanding, and he was satisfied that the parties were truthful persons, though it might be that their memories were at fault. Judging by the evidence, it appeared that Captain Lubbock told the plaintiff that the new drainage scheme would not affect the property, and she agreed to purchase. As a matter of fact, part of the system came right up to the boundary of the property. This was no doubt quite an innocent misrepresentation, but it entitled plaintiff to succeed in the action.

Mr. Gavin Simonds, K.C., and Mr. Roxburgh appeared for the plaintiff, and Mr. Archer, K.C., and Mr. W. Hunt for the defendants.

TRADE NOTES

The Patent Impermeable Millboard Co., Ltd., of Sunbury Common, Middlesex, have recently issued a booklet containing general information and fixing instructions re Insulwood insulation boards, and illustrations of some of the buildings in which this material has been used, including the City of Antwerp Pavilion, erected at the Antwerp International Exhibition, a photograph of which is reproduced on this page. Insulwood, it is stated, is made from real wood fibres, scientifically and chemically treated and waterproofed to prevent, it is claimed, bacterial action, rot, deterioration, disintegration of the fibres through lapse of time, condensation and dampness. It is also claimed to give maximum thermal and sound insulation consistent with structural strength, long life and durability, and to harden with age. It is made in standard thicknesses of ½ in. and ¾ in. in sizes ranging from 12 ft. by 6 ft. to 4 ft. by 2 ft.

*

The main entrance to the new headquarters of the London Coastal Coaches, in Buckingham Palace Road, S.W.1, is faced with a mixture of broken glass and "Snowcrete," supplied by the British Portland Cement Association, Ltd. The glass was first crushed and mixed with the cement, and the mixture poured between the shuttering. When the cement had set, the boards were removed and the surface rubbed down. By this means the small pieces of glass were exposed on the surface, giving it a scintillating effect. This form of concrete has, it is claimed, unlimited possibilities. Glass of any colour can be used, and, since it is a waste product, its cost is comparatively small. The architects for the building are Messrs. Wallis Gilbert and Partners.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Operating Department, Wellhouse Hospital, Barnet (pages 430–432). General contractor, H. E. Winskell. Sub-contractors : Salter, Edwards & Co., Ltd., asphalt ; Diespeker & Co., Ltd., reinforced concrete ; Rosser and Russell, Ltd., central heating; Locke and Soares, electric wiring, electric light fixtures and bells ; Kite & Co., ventilation ; J. Bolding and Sons, Ltd., and Leeds Fireclay Co., Ltd., sanitary fittings; James Slater & Co., Ltd., and Leeds Fireclay Co., Ltd., sterilizing apparatus ; J. Gibbons, Ltd., instrument cupboards, glazed fixed screens and lantern lights; Ericsson, Ltd., telephones; Avery & Co., dark blinds; J. P. White and Sons, hospital doors; W. B. Simpson and Sons, Ltd., terrazzo, murazzo and tiling; Camerer Cuss & Co., clocks.

Paultons House, Chelsea (pages 437–438). General contractors, R. Dixon and Sons. Sub-contractors : Smith, Walker, Ltd., steelwork; Welstead, Ltd., metal windows; Speedy and Eynon, electric light wiring; Speirs & Co., sanitary fittings and fireplaces; Marryat and Scott, Ltd., lifts; Potter Rax Gate Co., Ltd., enclosures and railings; Huntley and Sparks, Ltd., Cabot's quilting; A. R. H. Maxted, Ltd., fire escape stairs; J. W. Gray and Son, Ltd., lightning conductor system; John Wallis, facing bricks.

The City of Antwerp Pavilion, erected at the Antwerp International Exhibition, 1930. Some hundreds of thousands of square feet of Insulwood were used for the walls and partitions, and applied to timber framing, on the internal and external surfaces of the building.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BERMONDSEY B.C. has decided to erect twelve three-room and sixteen two-room flats on the Grange Walk site.

Messrs. Thomas and Son have varied the plans for the development of the Purley Downs estate to meet the wishes of the COULSDON U.D.C.

The Coulsdon and District Day Nursery Fund Committee has obtained a site in Chipstead Valley Road, COULSDON, for the erection of a day nursery.

The West Ham Corporation is to proceed with the erection of public baths at Romford Road, FOREST GATE.

The Guinness Trust is to erect six blocks of dwellings on the site of 57–63 Stamford Hill, and a block of thirty-two flats in Devonshire Road, HACKNEY.

The St. Pancras B.C. is to acquire a site in Leighton Road and Lady Margaret Road, KENTISH TOWN, for a housing scheme.

Plans passed by the LEWISHAM B.C.: Rebuilding "Prince of Wales" public-house, Perry Rise, for Messrs. Charrington & Co., Ltd.; six streets on the Hal Park estate, Catford, for Mr. J. Everington; rebuilding shop, 43–5 Lewis Grove, for Express Dairy Co., Ltd.; two streets on Perry Rise estate, Forest Hill, for Mr. F. Durrant; four-story building, 71 High Street, for Mr. S. W. Ackroyd: forty-one houses, Grove Park Central estate, for Mr. W. J. Brise: six shops and flats, Randlesdown Road, for Messrs. H. and J. Taylor: temporary school, Mayow Road, for Messrs. W. Harbrow, Ltd.: four houses, Chinbrook Road, for Mr. A. E. Adams; alterations. "Freemason's Arms," Ladywell Road, for Mr. F. M. Kirkby; sixteen houses, Harland Road, for Messrs. W. J. Scudamore, Ltd.; sixteen garages, Honor Oak Park, for Mr. E. C. Christmas; nine houses, Allerford Road, for Messrs. A. J. Glock, Ltd.: ten houses, Callander Road, for Mr. H. R. Watt; four houses, Senlac Road, for Mr. W. J. Brise; eighteen houses, Westwood Park, for Mr. H. Macintosh; extensions, sports pavilion, Firhill Road, for Mr. H. R. Watt: rebuilding "Foresters" Tavern, Perry Vale, for Messrs. Thomas and Edge; eleven houses, Perry Rise, for Mr. R. B. Rowell.

The ST. PANCRAS B.C. reports that the scheme for the development of the Crown estate in the Cumberland Market area includes the provision of a day nursery.

The ST. PANCRAS B.C. has prepared plans for extensions at the Camden Street library.

Plans passed by the ST. PANCRAS B.C.: Further buildings for motor coach station in Crescent Place; building at St. Bartholomew's Church, Gough Street; motor coach station, abutting upon Euston Road, Chesterfield Street and Argyle Square; rebuilding "Crown" public-house, 100 Arlington Road.

The SHOREDITCH B.C. has prepared a scheme for remodelling the Haggerston library at a cost of £3,784.

Plans passed at SHOREDITCH: Factory, 29–32 Catherine Street; extension, "Queen's Head" public-house, 45 Pitfield Street; building, 19–21 Canal Road.

SOUTHERN COUNTIES

The BOURNEMOUTH Corporation is to utilize allotment land at Talbot Village for the erection of houses.

The BOURNEMOUTH Education Committee has obtained sanction for a loan of £8,960 for extensions at the School for Girls.

The BRIGHTON Corporation has obtained sanction to borrow £17,000 for the erection of stables at the racecourse.

The BRIGHTON Corporation Electricity Committee has obtained sanction to borrow £27,000 for the erection of a building for the purposes of electricity showrooms, offices, etc., in Castle Square.

The BRIGHTON Education Committee has obtained sanction to borrow £33,569 for the erection of a public elementary school at Whitehawk.

Plans passed by the BRIGHTON Corporation: Alterations, 106 Western Road, for Mr. A. Woods: house, Tivoli Crescent, for Mr. S. H. Griffiths: five houses, Widdicombe Way, for Messrs. Brabons, Ltd.; four houses, Warmdene Road, Patcham, for Mr. J. A. Yetman; alterations and additions, Race Hill Inn, Lewes Road, Beaufort Hotel, Queen's Park Road, and "Elephant and Castle" public-house, London Road, for Tamplin and Son's Brewery (Brighton), Ltd.; setting back premises, 20 West Street, for Ocean Accident and Guarantee Corporation, Ltd.; alterations, 63–6 North Street, for Messrs. Joseph Smith (Brighton), Ltd.; extensions, Reneta Hotel, Montpelier Road, for Messrs. I. and R. Cohen; meeting-room, St. Matthias Church, Ditchling Road, for Churchwardens; Free Church, King Charles's Avenue, Woodingdean, for Mr. S. Etheridge; four houses, Vernon Avenue, for Mr. H. King Jones; two shops and two houses, Widdicombe Way, for Messrs. Braybons, Ltd.; alterations, 94 London Road, for Brighton Equitable Co-operative Society, Ltd.; alterations, 89 Western Road, for Messrs. Cave, Austin & Co., Ltd.; five houses, Hollingbury Rise, for Messrs. Robert Newman and Son; four houses, Stanmer Park Road, for Mr. C. Munday; alterations. 7 Buckingham Road, for Brighton and Hove Dental Hospital; licensed premises and flats, Marine Parade and Charles Street, for Messrs. Edlins, Ltd.; three flats, 91–5 May Road, for Mr. G. Ayling; extensions, Northend House, High Street, Rottingdean, for Sir Frederick Jones, K.B.E.; two houses, Warren Road, Woodingdean, for Mr. W. H. Clark; two houses, Carden Avenue, for Mr. E. H. Riwe; fourteen houses, off Warren Road, Woodingdean, for Mr. W. H. Clark: three almshouses, Carden Avenue, for Mrs. S. C. Turner.

Plans passed by the HERNE BAY U.D.C.: Five bungalows, Carlton Hill and elsewhere, for Messrs. Goodwin and Russell, Ltd.; two bungalows, The Broadway, for Mr. E. J. Line; six houses, Southsea Drive, for Mr. C. J. Jordan; house, Western Esplanade, for Messrs. Woolf Bros.; bungalow, The Broadway, for Mr. A. P. Bennett: bungalow, Ivanhoe Road, for Herne Bay Estates, Ltd.

The East Sussex Education Committee is to erect a secondary school for girls in Old Shoreham Road, HOVE.

Plans have been lodged with the Brighton Corporation, by Mr. S. Milsom, for the erection of a village hall at OVINGDEAN.

The Brighton Corporation has obtained sanction to borrow £3,000 for the purchase of land as a housing site at ROTTINGDEAN.

SOUTH-WESTERN COUNTIES

The DORCHESTER Corporation is to have plans prepared for the erection of twenty houses on the Victoria Park estate.

The DORCHESTER Corporation is considering the provision of an isolation hospital, in association with the neighbouring authorities of Cerne, Wareham, and Purbeck.

Plans passed by the DORCHESTER Corporation: House, Edward Road, for Mr. W. M. Sercombe; improvements. "Royal Oak" Hotel, High West Street, for Messrs. Eldridge Pope & Co., Ltd.; bungalow, East Parade, for Mr. A. J. Perry; three bungalows, Louise Road, for Messrs. Watts Bros.

The PAIGNTON U.D.C. is seeking sanction to borrow £4,100 for the erection of another ten houses on the Collaton estate.

Plans passed by the PAIGNTON U.D.C.: Twelve houses, Laura Grove, for Mr. C. Williams; house, Dartmouth Road, for Mr. F. G. Stockman: six houses, Colley End Road, for Messrs. Coombe and Sons; house, Winsu Avenue, for Mr. A. Chippendale; alterations, 14 Victoria Street, for Messrs. Brock & Co., Ltd.; house, Osney Crescent, for Mr. G. C. Verry: two houses, Shirton Lane, for Mr. A. Chippindale: bungalow, Blatchcombe Road, for Messrs. E. and A. Diggines.

The PORTLAND U.D.C. is negotiating for a site for the erection of about fifty houses.

The WEYMOUTH Corporation is to erect sixty-two houses on the Westham estate.

MIDLAND COUNTIES

The BEDFORD Corporation proposes to erect 204 houses on the new London Road estate.

Plans passed by the BEDFORD Corporation: House, Kimbolton Road, for Mr. G. Smith: extensions, Elstow Road depot, for Redline Motor Spirit Co., Ltd.; extensions, Handicraft centre, Harpur central school, for Mr. G. P. Allen; workshop, Houghton Road, for the Bedford Engineering Co.; two houses, Southville Road, for Messrs. E. Two and Son; alterations and additions, Burnaby House, Burnaby Road, for Bedford School governors; two houses, Elstow Road, for Mr. C. A. White.

The BIRMINGHAM Corporation proposes to undertake various clearance schemes, and has investigated the question of rehousing accommodation, in the cheapest manner, for seven thousand families, and ascertained that the costs would be £3,704,000 for all flats: £3,624,000 for flats and maisonnettes, and £3,465,000 for all maisonnettes. The housing sub-committee recommends the erection of a modern colony of flats or tenement buildings.

Mr. H. E. Farmer, architect, has prepared plans for the erection of shops in Bridge Street, WALSALL.

The WALSALL Corporation is seeking sanction to borrow £22,000 for the erection of shops and offices at the Leicester Square corner.

The WALSALL Corporation has obtained another housing site in West Bromwich Road.

The trustees of the Blakenall Congregational Church have obtained a site on the Field estate, WALSALL, for the erection of a church.

NORTHERN COUNTIES

The BARNSLEY Corporation has obtained sanction to borrow £11,000 for the erection of a nurses' home at Kendray hospital.

The BLYTH Corporation is to undertake clearance schemes in Old White Row and Hodgsons Mill, involving some fifty houses.

The BLYTH Education Committee is to utilize a recreation ground site in Princess Louise Road for the erection of an infants' school.

Plans passed by the BLYTH Corporation: Four houses, Barrass Avenue, for Messrs. Pattison and Hush; two bungalows, Fourteenth Avenue, for L.N.E.R., Cottage Homes Committee; house, Delavel Avenue, for Mr. Andrew Best.

The Durham County Council recommends a site in Hedgley Road, HEBBURN, for the erection of relief offices.

The SALE U.D.C. is to erect another fifteen houses in Doveston Road and Chapel Road.

Mr. J. H. Hinchliff has prepared plans for the erection of thirty-four houses for the STAINCROSS U.D.C.

The WIGAN Corporation is to erect ninety houses on the Wigan Road estate.

WALES

The SWANSEA Corporation has obtained twenty-five acres of land at Mayhill for a housing scheme.

SCOTLAND

The GLASGOW Education Committee is considering the erection of an elementary school for Roman Catholic children in Anworth Street, Tollcross.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_1	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kiddermin-ster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENS-FERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKE-FIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 9
¾″ Crushed Ballast . . . . . ,,	10 0
Building Sand . . . . . ,,	10 6
Washed Sand . . . . . ,,	11 6
2″ Broken Brick . . . . . ,,	9 6
¾″ ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4″ s. d.	6″ s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,, ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾″ Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bend . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . . . ,,	1 0 0
,, Buffs and Creams, Add . . ,,	2 0 0
,, Other Colours . . . ,,	5 10 0
2″ Breeze Partition Blocks . . per Y.S.	1 9
2½″ ,, ,, ,, . . . ,,	2 0
3″ ,, ,, ,, . . . ,,	2 3
4″ ,, ,, ,, . . . ,,	3 0

MASON

	s. d.
The following d d F.O.R at Nine Elms :	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2″ . . . . F.S.	1 8
,, ,, 3″ . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d d F.O.R. London station :

	£ s. d.
24″ × 12″ Duchesses . . . per M.	31 0 0
22″ × 12″ Marchionesses . . ,,	28 0 0
20″ × 10″ Countesses . . ,,	20 5 0
18″ × 10″ Viscountesses . . ,,	17 0 0
18″ × 9″ Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20″ × 10″ medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1″ F.S.	9
Deal, Joiner's . . . . ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured ,, . . . ,, ,,	1 3
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . . ,, ,,	4
,, British Columbian . . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . . ,, ,,	1 1
Deal floorings, ¾″ . . . . Sq	1 1 0
,, 1″ . . . . ,,	1 3 6
,, 1¼″ . . . . ,,	1 5 6
,, 1½″ . . . . ,,	1 11 0
Deal matchings, ⅝″ . . . . ,,	1 15 0
,, ¾″ . . . . ,,	16 0
,, 1″ . . . . ,,	17 6
Rough boarding, ¾″ . . . . ,,	1 6 0
,, 1″ . . . . ,,	18 0
,, 1½″ . . . . ,,	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness .	⅛″	¼″	⅜″	½″
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon				
Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak				
1 side	8½ 7 –	10 8 –	11½ – –	1 6 – –
Plain Oak				
1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼″	½″	1″	1½″	2″
Tubes, 2′–14′ long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12″–23½″ long, each	10	1/1	1/11	2/8	4/9
,, 3″–11½″ long ,,	7	9	1/3	1/8	3/–
Long screws, 12″–23½″long,,	11	1/3	2/2	2/10	5/3
,, ,, 3″–11½″long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts :

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾″ . . ,,	10 0
,, ,, ⅝″ . . ,,	9 9
,, ,, ½″ . . ,,	9 6
,, ,, ⅜″ . . ,,	9 0
,, ,, ¼″ . . ,,	9 0
,, ,, 1″ . . ,,	9 0
,, ,, 1¼″ . . ,,	9 0
,, ,, 1½″ . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	3″ s. d. 7	4″ s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9″ offsets. . ,,	4 0	6 3
Plinth bends, 4½″ to 6″ . . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	20 0
,, drawn pipes . . . ,,	20 6
,, soil pipe . . . ,,	23 6
,, scrap . . . ,,	10 0
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes :	3″ s. d.	4″ s. d.	6″ s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼″ Polished plate, n/e 1 . ,,	1 0	to 1 3
,, ,, 2 . ,,	1 2	,, 1 7
,, ,, 3 . ,,	1 7	,, 2 5
,, ,, 4 . ,,	2 1	,, 2 11
,, ,, 6 . ,,	2 3	,, 3 2
,, ,, 8 . ,,	2 6	,, 3 6
,, ,, 12 . ,,	2 9	,, 3 8
,, ,, 20 . ,,	3 0	,, 3 11
,, ,, 45 . ,,	3 3	,, 4 1
,, ,, 65 . ,,	3 7	,, 4 6
,, ,, 90 . ,,	3 10	,, 4 0
,, ,, 100 . ,,	4 0	,, 5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,, over 15 . ,,		7 6
Putty, linseed oil . . . lb		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility ean be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes		6
,, ,, to trenches		6
,, ,, extra, only if left in		3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings		17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
¾″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1¼″ ,, ,, ,, ,,	,,	2 7 6
¾″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1¼″ ,, ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
¼″ do.	,,	3 4 0
½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1¼″ deal moulded sashes of average size	F.S.	2 1
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ¾″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1¼″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1¼″ deal moulded wall strings	,,	2 6
1¼″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	,,	1 19 0
Do. in covering to turrets, etc.	,,	2 6 0
Do. in soakers	,,	1 12 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1¼″ s. d. 2 8	2″ s. d. 3 8	4″ d. —
Do. soil pipe and fixing with cast lead tacks	Each	—	—	—	—	—	5 9
Extra, only to bends	,,	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	36 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,, ,,	,,	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

FROM THE NEW WORLD: 4

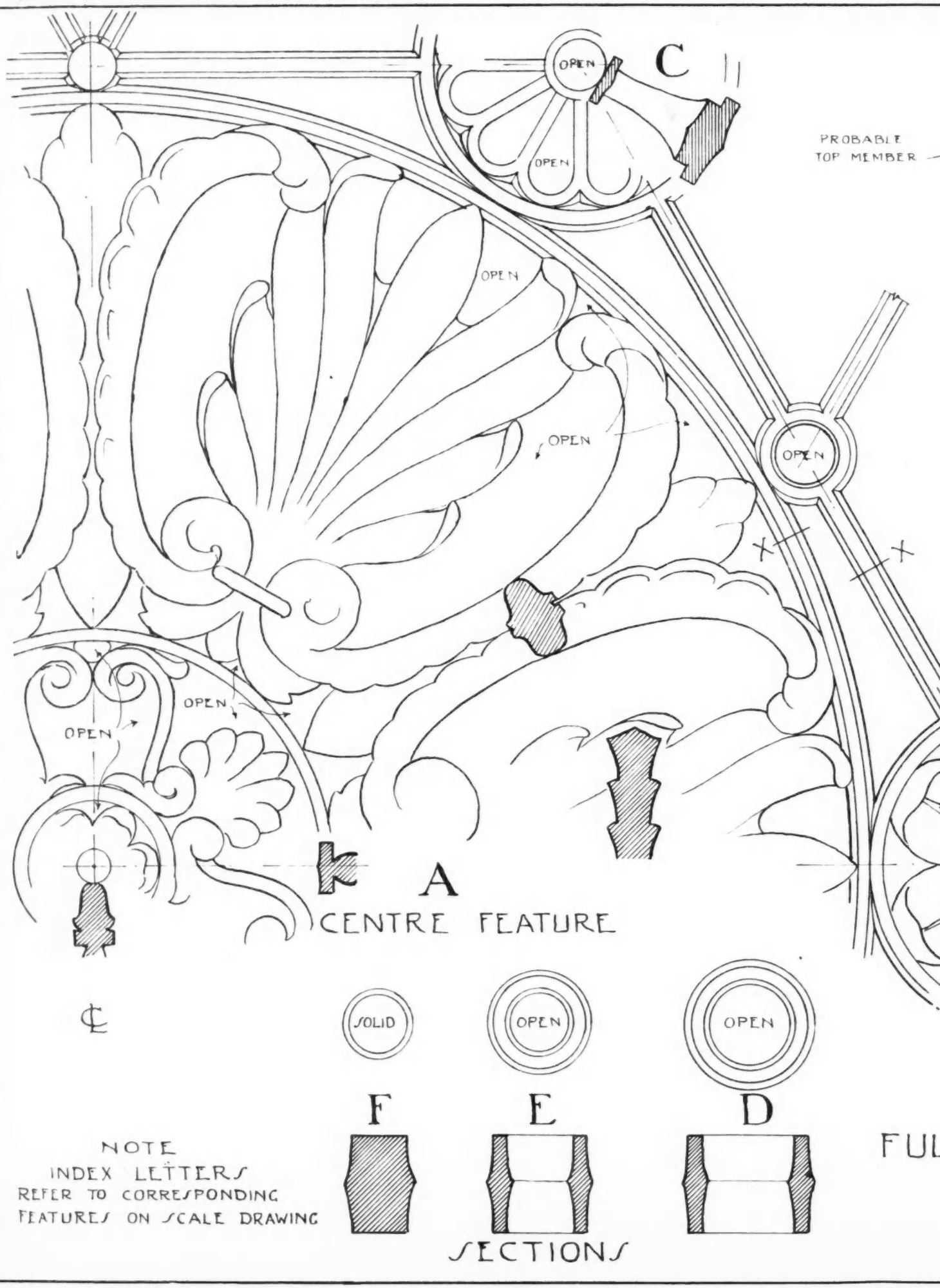
MEASURED DRAWINGS OF AN AMERICAN COLONIAL RAILING

RAILING IN CAST IRON, FROM WASHINGTON, D.C.

THE example of old Colonial cast iron, of which a photograph is given above, while drawings by R. Keith Harris occupy the remaining pages of this supplement, will bear comparison with anything of its date and kind to be found in the older countries.

Its exquisite design and proportion, its ingenious setting-out, are matched by the craftsmanship displayed in its casting.

The top member is missing. It possibly consisted of a plain wooden rail, but more probably of simple wrought iron, as suggested in the drawing. Inspection of the casting at close quarters confirms the first impression of its delicacy and perfection—qualities that pay significant tribute to the art and skill of the founder.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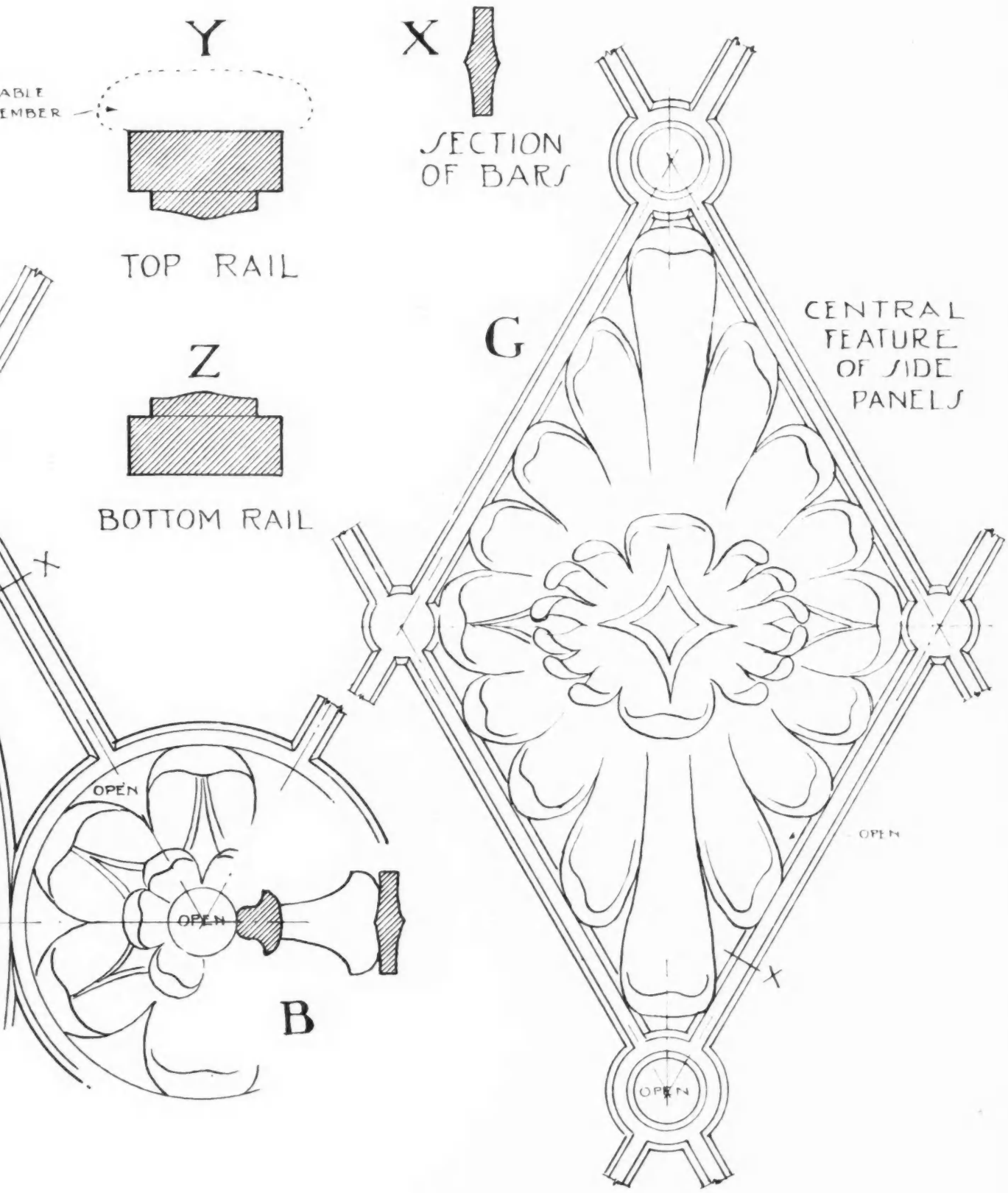
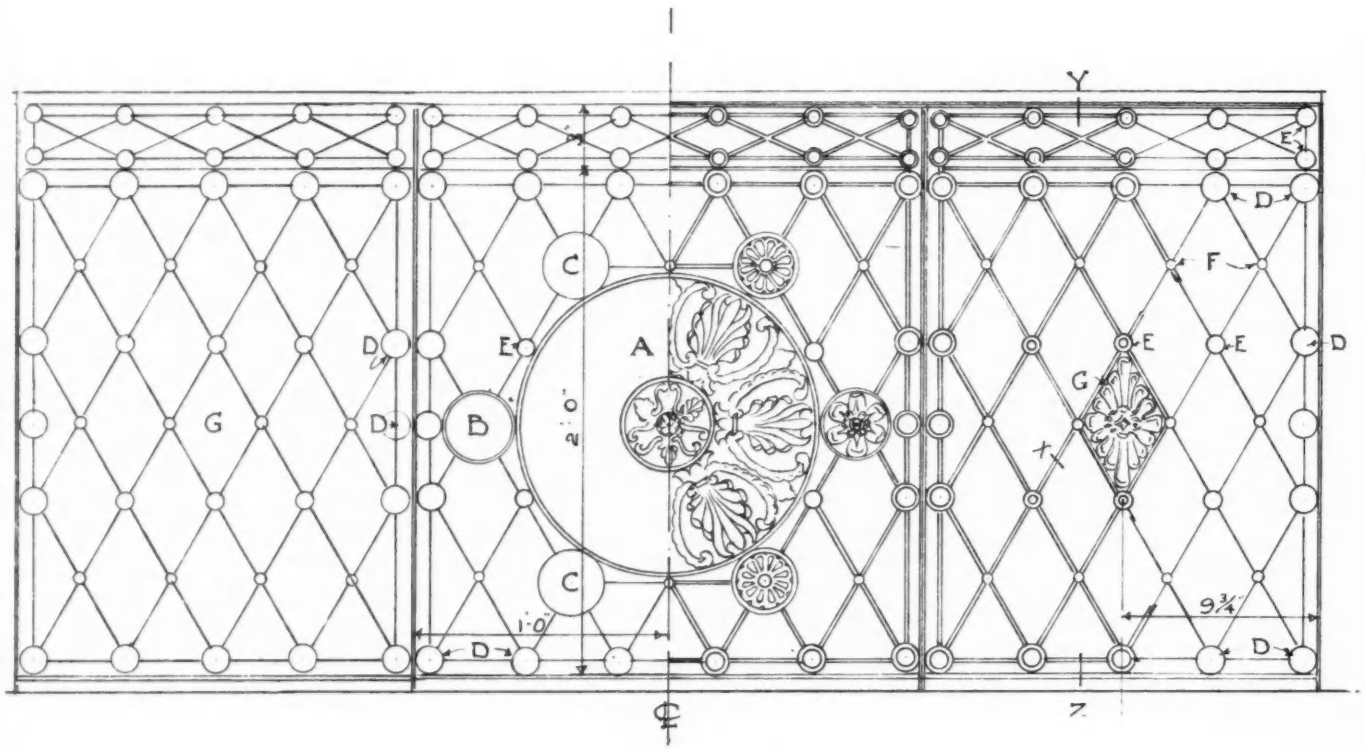


FULL SIZE DETAILS OF CAST IRON RAILING
15TH STREET N.W. WASHINGTON. D.C.
(SEE SCALE DRAWING)

R. KEITH HARRIS MENS. & DEL.

[*For elevation see drawing overleaf.*



SCALE 1½ IN = 1 FOOT.

CAST IRON RAILING.

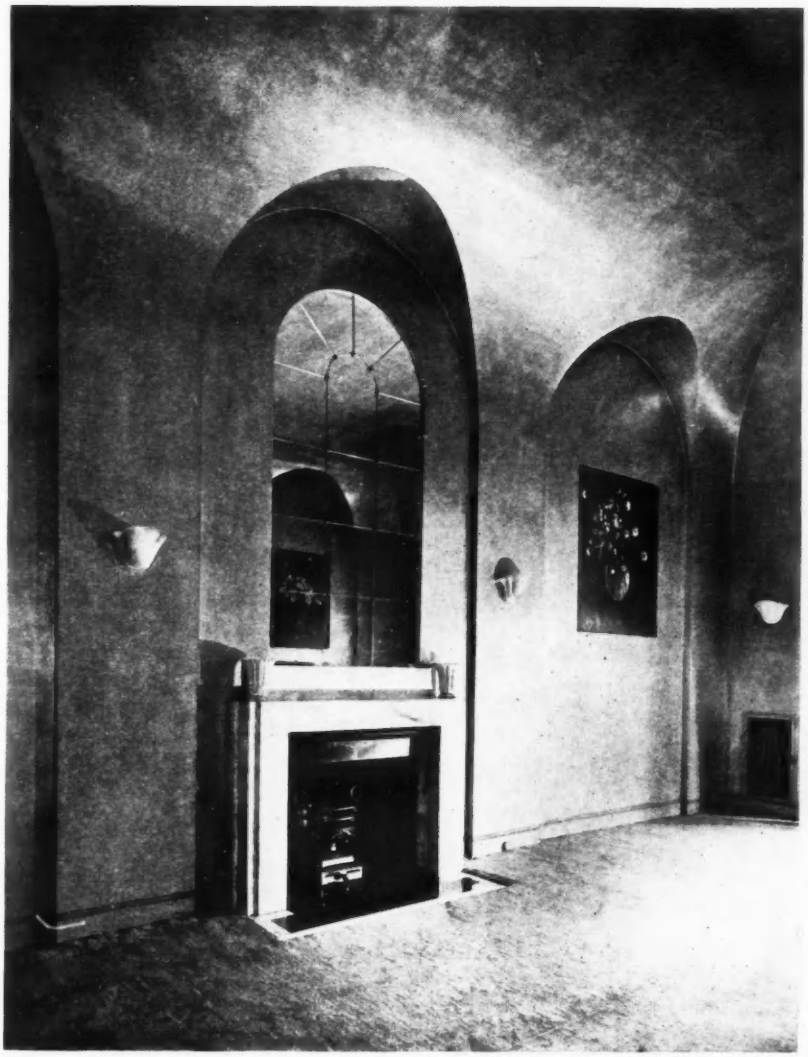
15TH STREET N.W. WASHINGTON. D. C.

(ATTRIBUTED TO ROBERT MILLS.)

R. K. H. MENS. & DEL.

AT No. 20 BELGRAVE SQ., S.W.

DETAILS OF A MODERN ROOM IN A REGENCY HOUSE



[*Lord Gerald Wellesley and Trenwith Wills, Architects.*

STIPPLED SILVER-LEAF WALLS AND EGYPTIAN ALABASTER FIREPLACE

WALL features of the room in a Regency house in London, recently reconstructed and redecorated in accordance with the designs recorded, to scale, overleaf, are the fireplace, seen in the view reproduced above, a sunk mirror in the side opposite to it, a mirror door in one of the ends, and a bronze window the full height of the room in the other, all of similar character.

The ceiling is coved, and its entire surface, in common with that of the walls, is finished in silver leaf, stippled biscuit colour. The subdued glow thus attained makes a becoming background for four flower studies by Mrs. Payne Thompson, for whom the room was designed; these are sunk into the wall in shallow recesses provided for that purpose.

The chimney-piece is carried out in Egyptian alabaster, with a border of the same to a black marble hearthstone. A golden harmony of colour thus runs through the walls and the white and yellow markings of the alabaster —and, it may be added, through the furniture, which is upholstered in pale gold and black, with splashes of crimson. It is a modern room of refined elegance.

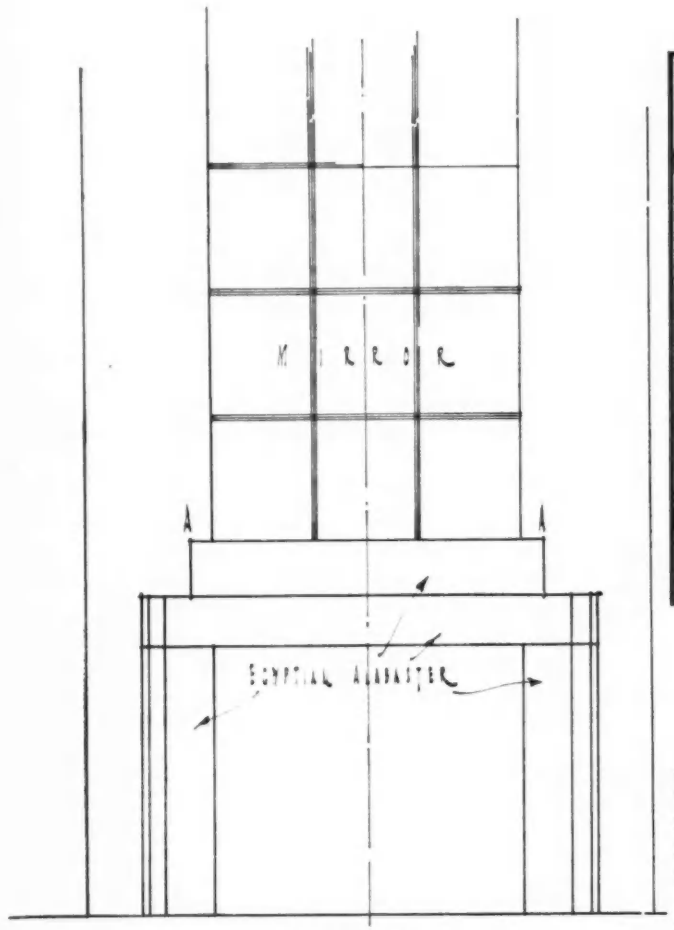
N° 20 BELGRAVE SQUARE · LONDON · S·W

SITTING ROOM - FIRST FLOOR·

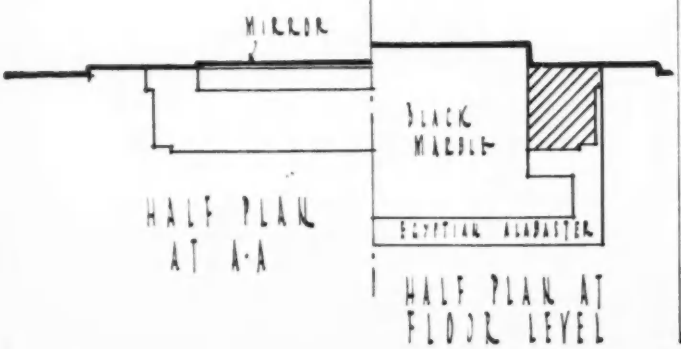
DETAILS OF RE-CONSTRUCTION AND RE-DECORATION

SCALE FOR ELEVATIONS · ¼ IN. TO 1 FOOT·

SCALE FOR FIREPLACE DETAIL · ½ IN. TO 1 FOOT·

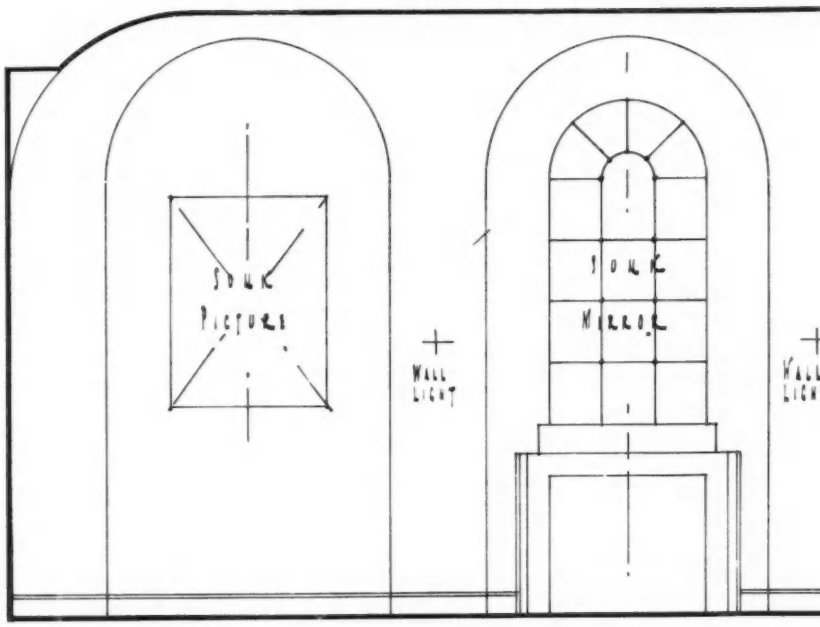


ELEVATION OF FIREPLACE

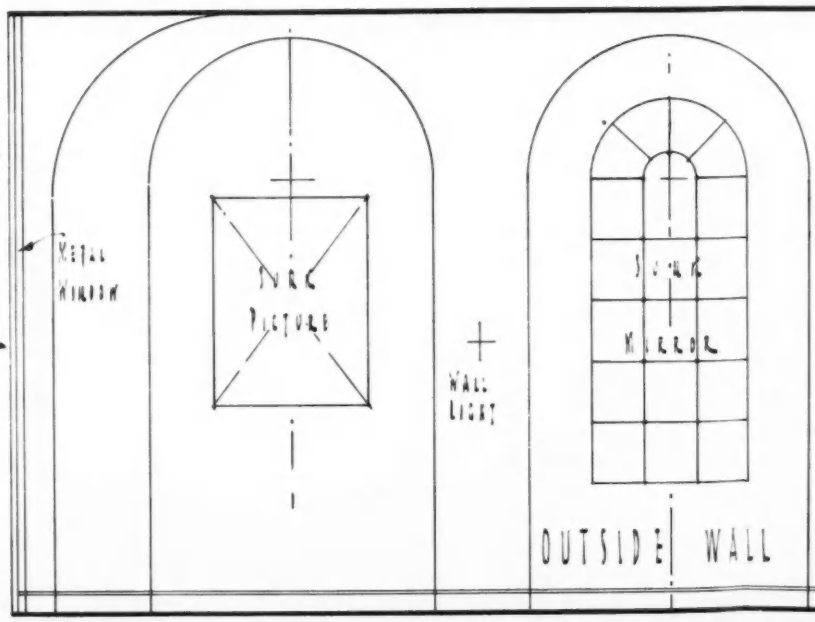


HALF PLAN AT A·A

HALF PLAN AT FLOOR LEVEL



FIREPLACE WALL



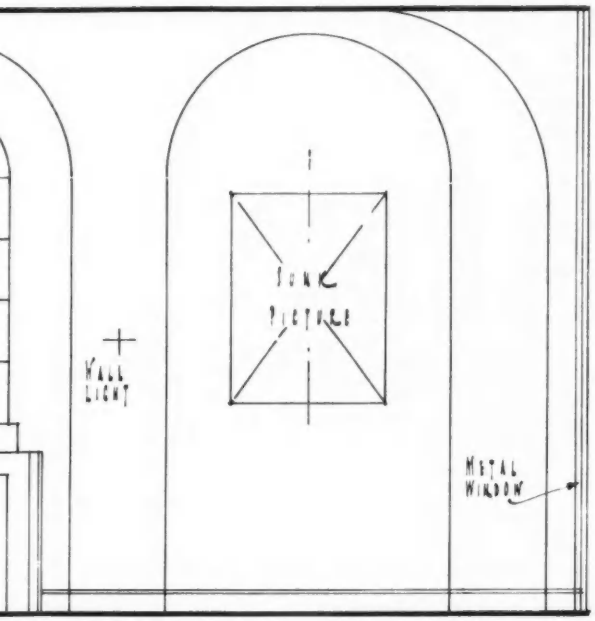
OUTSIDE WALL

GERALD WELLESLEY FRIBA
TRENWITH WILLS ARIBA
-ARCHITECTS-

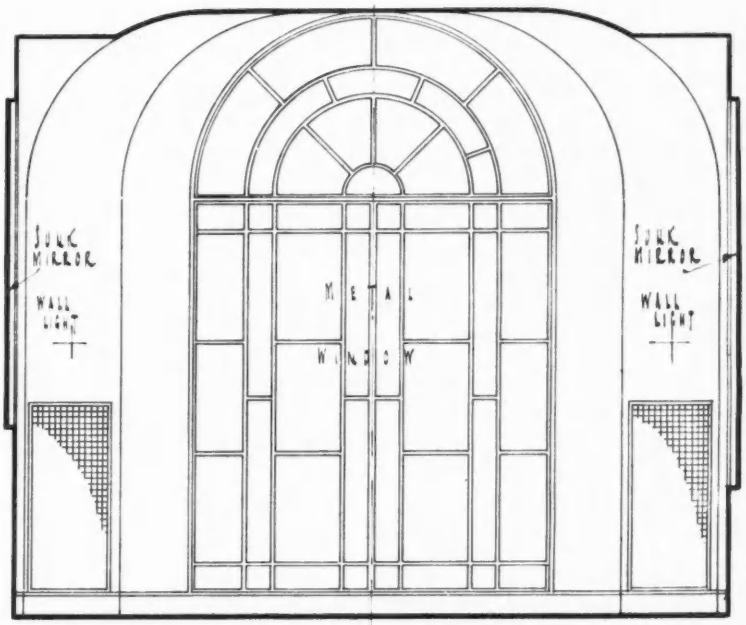
NOTE

THE WALLS & COVED CEILING ARE COVERED WITH SILVER LEAF & STIPPLED BISCUIT COLOUR -

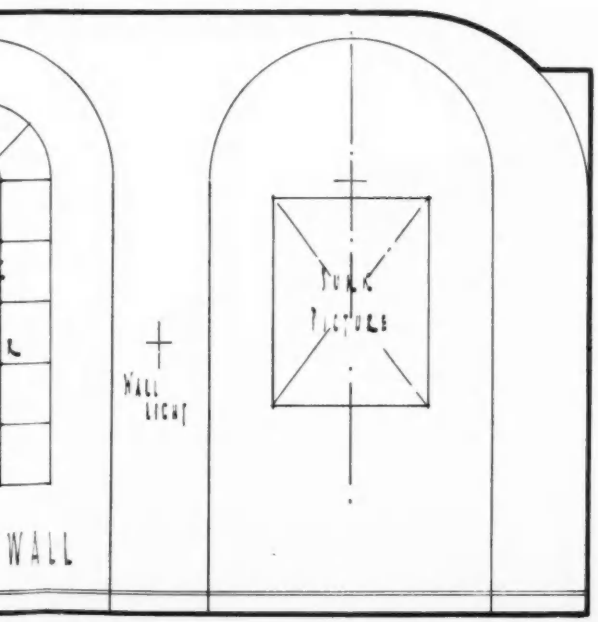
THE FIREPLACE IS IN EGYPTIAN ALABASTER -
THE HEARTH IN BLACK MARBLE WITH A BORDER OF EGYPTIAN ALABASTER -



WALL



WINDOW WALL



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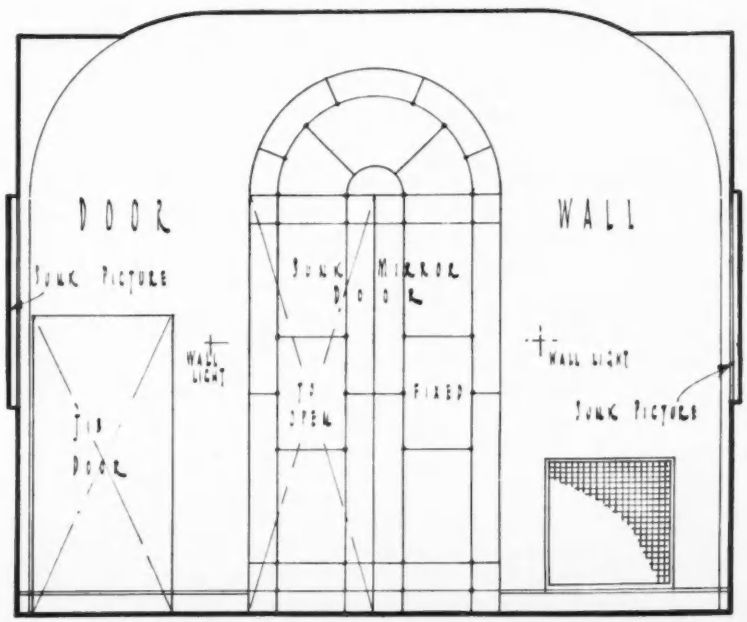

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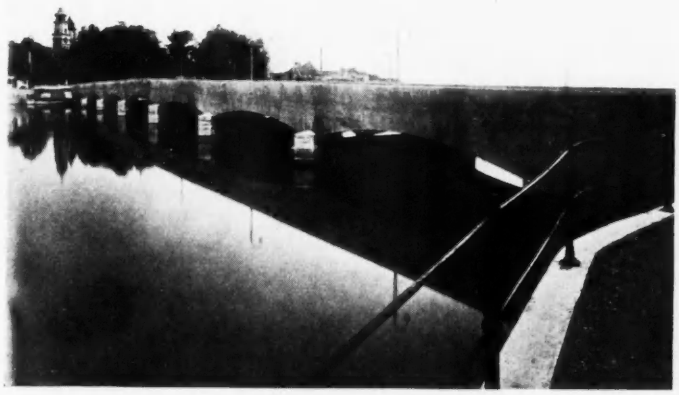
SELECTED PRECEDENTS:

MULTIPLE-SPAN CONCRETE BRIDGES ABROAD

APART from such important considerations as monolithic homogeneity and almost non-existent maintenance costs, the chief advantage of reinforced concrete over fabricated steel bridges is the greater simplicity of design resulting from reduction in the number of structural elements and the absence of ubiquitous ends and edges and angles—to say nothing of the often heinously "ungrammatical" punctuations of rivet-heads. The five road bridges reproduced, all of which were built during the last decade, are intended to illustrate not progress in concrete design, but different types of concrete construction. From the purely æsthetic point of view the tidy flush surfaces of this material are perhaps its greatest asset.

The "bowstring" bridge (one of the commonest types of steel bridge for wider spans) is a form of rigidly suspended structure in which the parabolic arch of the "bow" supports the taut "string" of the platform. When steel is used the "bow" needs to be cross-braced between the vertical supports. With concrete construction this necessity does not arise. Owing to our superannuated bylaws, the concrete bowstring bridge, long familiar abroad, is almost unknown in England. In France it was adopted by the "Ponts et Chaussées" after the war as the standard type for the routes nationales. Figure **2** *shows a bowstring bridge in Brazil, each of the six spans of which measures 29.30 metres.*



[By courtesy of Wayss and Freytag, Frankfort-on-Main.

1. *SEVEN-SPAN ARCHED BRIDGE LINKING THE TOWN AND ISLAND OF LINDAU IN LAKE CONSTANCE WITH THE WURTEMBERG MAINLAND.*

The graceful design of the elongated arches in figures **3** *and* **5** *might make it appear that they were stone structures. In reality, their arch curves are too flat, and their arch crowns too thin for this to be possible. In both cases local amenities influenced design. The former crosses the Neckar, a tributary of the Rhine, at one of the most famous beauty-spots in Germany; while the five spans of the latter (two of 47 and three of 57 metres) vault lightly across a particularly lovely reach of the Loire.*

Figure **1** *is an example of clean, monolithic dignity, with massive, almost monumental, proportions. Its seven equal spans join the island in Lake Constance, on which the town of Lindau is built, to the mainland of Wurtemberg.*

Figure **4** *illustrates a flat, half-hexagon type of arch, impossible in steel or masonry, which permits of an even gentler rise in gradient than that adopted for figure* **1**. *The pavements are cantilevered out continuously over the four arches.*

In figures **2** *and* **5** *the parapets are of slotted concrete slabs; figures* **1** *and* **4** *have solid balustrades; while in figure* **3** *iron railings are employed.*

P. MORTON SHAND

[By courtesy of Christiani and Nielsen, Copenhagen.

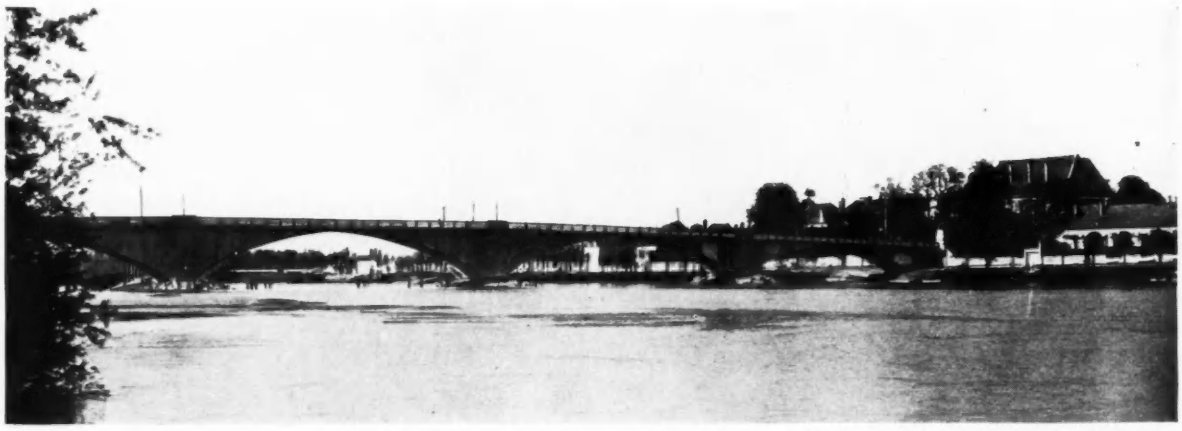
2. *SIX-SPAN "BOWSTRING" BRIDGE OVER THE POMBA RIVER, STATE OF RIO DE JANEIRO, BRAZIL (1921).*

[By courtesy of Wayss and Freytag, Frankfort-on-Main.

3. *FOUR-SPAN ELLIPTICAL ARCH BRIDGE OVER THE RIVER NECKAR AT HEIDELBERG.*

[By courtesy of Dyckerhoff and Widmann, Wiesbaden-Biebrich.

4. *FOUR-SPAN FLAT ARCH BRIDGE AT EICHSTADT, GERMANY.*



[By courtesy of Christiani and Nielsen, Copenhagen.

5. *FIVE-SPAN ELLIPTICAL ARCH BRIDGE OVER THE RIVER LOIRE AT COSNE (1929).*

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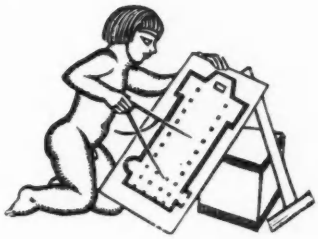
THE ARCHITECTS' JOURNAL



WEDNESDAY, OCTOBER 7, 1931

THE FUTURE IN THE PRESENT

THE scheme for a municipal bathing station at Wannsee, near Berlin, of which there are illustrations in a supplement to this issue, has a social and economic as well as an architectural significance. Appearing at a juncture when Germany's financial affairs and our own are of international concern, this project, only a portion of which is executed, immediately provokes the question—Ought a country to indulge in grandiose schemes when it is hard up? Is it a legitimate tonic, as a new hat is to a depressed woman; or an inexcusable extravagance?

The answer is one about which economists may and do differ, but the question may be at least illuminated by regarding the present less as the tail-end of the past and more as the first stage of the future.

That we have arrived there is plain. For the first time in the history of the earth there is superfluity on a grand scale of most of the things that the civilized world requires. Mass-production has already achieved this result. Plant has been laid down sufficient to supply more goods than can be absorbed, and food is more abundant than mouths that can afford to eat it. In times past a conquered nation was required to work for its conquerors. Nowadays it is desired to abstain from working or else it will upset its conquerors' business.

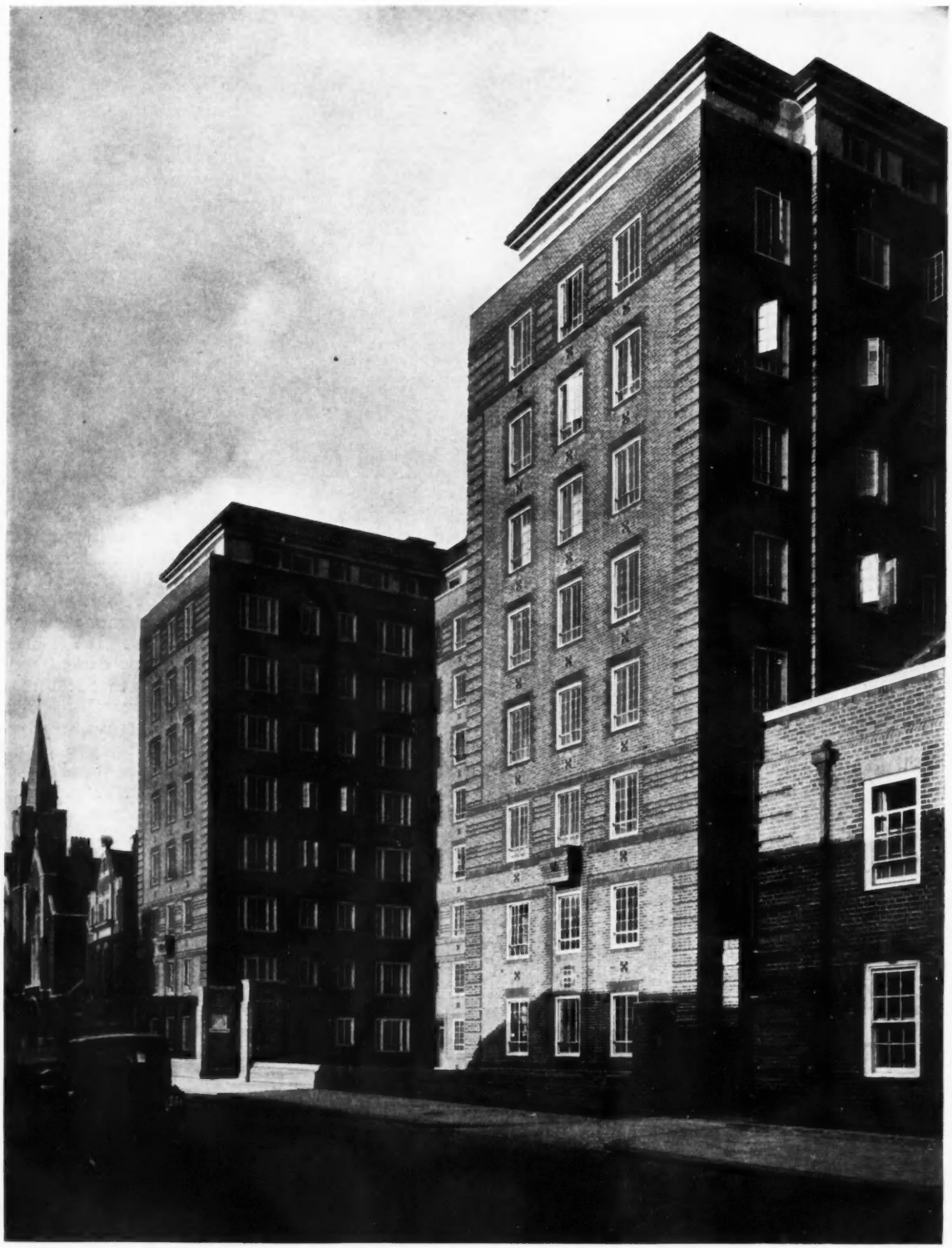
Such a state of affairs is clearly absurd. Either the intelligence of mankind will prevail or else catastrophe will consume this actual and potential plenitude. In the former case there will be such a liberation of energy as has not hitherto been dreamt of, and that energy, we believe, must be absorbed largely in the provision of buildings adequate to the private and public needs of the community. The scope remains ample, and the next two or three generations need not worry about the purely contemplative life. Housing, transport and facilities for public health and enjoyment will provide sufficient outlet for creative energy. It would be a pity if too much of it had to be wasted in obliterating the more futile and unpleasant-looking works of the present day and conversely it would be gratifying if we could believe that some of these works were designed with such fitness for their purpose and position that in the future they would seem perhaps a little old-fashioned yet worthy of a permanent place in that better-conceived scheme of things.

The open-air bathing station at Wannsee seems to us very clearly to be of the latter kind. It fits into the landscape with singular felicity. Its curved terraces shelve down to the beach in a way that Nature, with more precise instruments at her disposal, might have attempted. Just so Chinese artists were wont to clarify and humanize the somewhat vague intentions of natural landscape. Up to the present only a section of the scheme has been carried out. This comprises the open-air café and some of the terraces with their dressing-boxes. The complete project, with its fan shape, seems designed to collect the visitors from the land and dissipate them outwards along the shore or propel them out on to the pier. It has the appearance of a living, organic entity, and the working-out of the project in detail does no more (and no less) than materialize, in a clean, cheerful and permanent fashion, the idea behind the whole.

This concentration of riparian pleasures and recreations is not to everyone's liking, and many English gorges would rise at such organized health and recreation. But the alternative in this crowded island is that almost continuous "development" that extends from the mouth of the Thames to Bournemouth, and those who seek isolation must work all the harder to make concentration agreeable.

The Wannsee project stands out as an early example of those spacious and orderly structures that the future—we hope, the near future—will see.

Such things are in every true sense of the word the reverse of extravagant. They represent comely and efficient plant for the production of public health and efficiency, and countries which use them in such a way will reap their reward. If the present clash of national rivalries and the present monetary system hinders such developments it is those that must be amended.



[*Buckland and Haywood, Architects.*

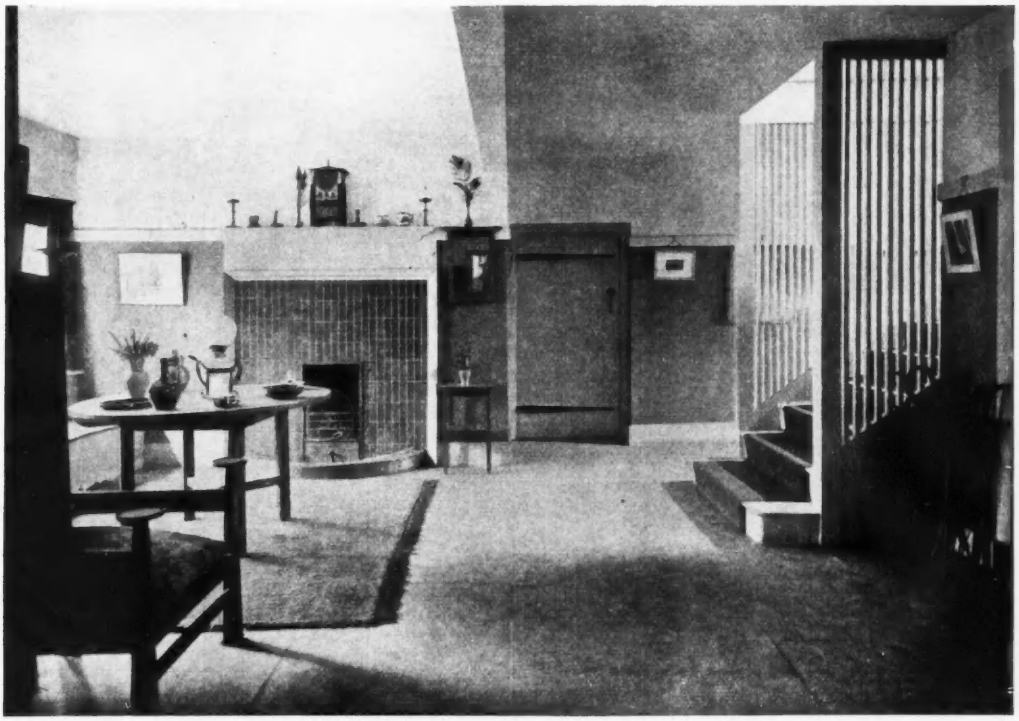
A MODERN ESSAY IN BRICKWORK

A view of Swan Court, Chelsea, taken from Manor Street. With the exception of the top story, which is treated with white cement, and a small artificial stone coping, the whole of the building is faced with, and has external features of, plum-coloured brickwork. Between the two projecting wings is a forecourt, a photograph of which appears on page 465.

NEWS & TOPICS

THE VOYSEY EXHIBITION

SIR EDWIN LUTYENS, in this month's *Architectural Review*, says of C. F. A. Voysey : " He was building—it was evident—what he liked. Fresh and serene, he created that with which you could laugh—a very different thing from much of the moribund building then prevailing which one laughed at. . . . The *hearted* shutters, the client's profile on the bracket, the absence of accepted forms, the long sloping slate-clad roofs, the green frames, the black bases and the black chimney pots contrasting with the white walls, clear and clean." The exhibition at Messrs. Batsford's Galleries, this week and next, contains photographs of a representative selection of every craft in Mr. Voysey's work. Most impressive, however, to young architects today will be his designs for houses, gaily-coloured and well proportioned. Voysey was building in 1890 in a manner far more simplified than most modern architects. As he writes himself, in an article, " 1874 and After," also in the current *Architectural Review :* " The 1851 Exhibition originated the idea of Utility as the basis of Art. All that was necessary for daily life could be and ought to be made beautiful." Visitors to the exhibition will find that Mr. Voysey has thoroughly carried out his principles by designing every detail and fitting of his buildings.



The dining-room of " The Orchards," Chorley Wood, Herts, designed by C. F. A. Voysey, in 1899, for his own occupation. An exhibition of his work is now being held at the Batsford Galleries.

BRIDGE-BUILDING IN DENMARK

Of late, several examples of the bridge-building art abroad have figured in this JOURNAL. In Denmark a beginning has been made on one of the most difficult bridging schemes ever attempted. The endeavour is to bridge the Little Belt in the Baltic, and thus connect Jutland, the Danish mainland, with the island of Funen, the second largest island in the Danish group. The bridge is planned to carry a double-track railway and two roads, and is scheduled for completion in 1935. The cost of the work is estimated at £2,000,000. Rapid currents are causing great difficulties in fixing the foundations of the first of the four stone buttresses, and the pressure of closely packed ice is expected to cause further trouble during the winter. This bridge will displace the train-ferries across the Little Belt, and is the first of extensive works planned by the Danish Ministry of Communications and Public Works to speed up traffic on the main routes between England and the Continent.

" THIS MOTORING " AND ITS CONCOMITANTS

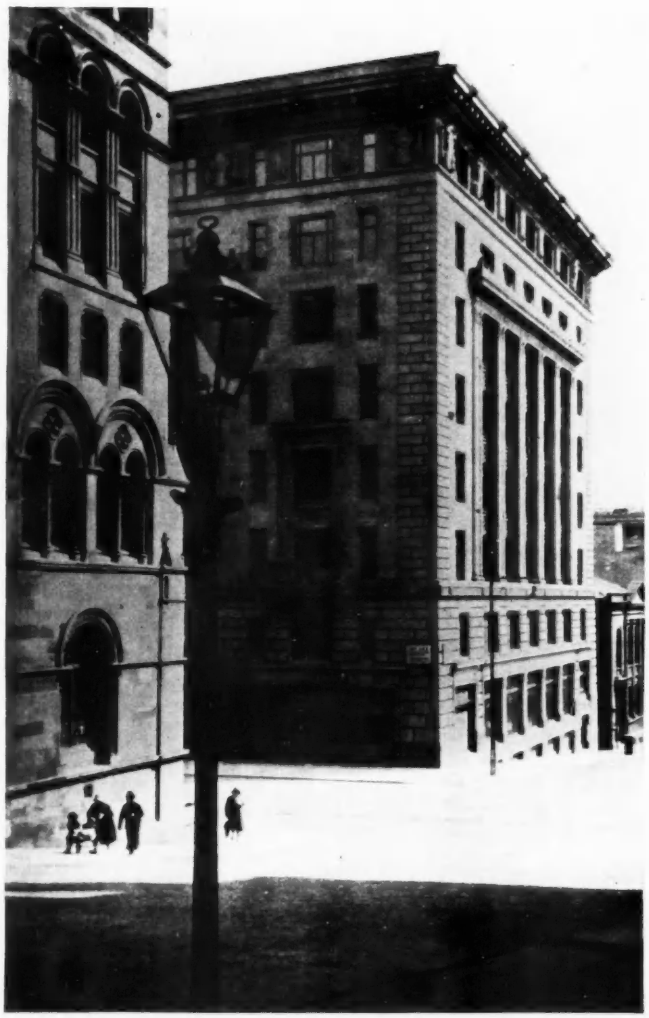
The scene is the Great North Road. " Within five or a few more years, roadside petrol pumps were even as the lilies of the field, albeit not quite so pretty. . . ." Thus Mr. Stenson Cooke, of the Automobile Association, in his book, recently published under the title " This Motoring." And he goes on to make the Honorary Treasurer of that ubiquitous organization boast : " Look at 'em ! Twenty-five pumps between Newark and Stamford. I've counted them, and the A.A. did it ! " True. The A.A., to whom I owe many kindnesses upon the road, is indeed a power in the land; I only hope that it will extend still farther that powerful influence, diligently seeing to it that the type of roadside pump and garage erected is likely to be inoffensive in appearance alike to the wayfaring motorist and the local inhabitant. The A.A. have shown their willingness to help the aims of the C.P.R.E. and similar organizations in numerous practical ways : this would be the most practical of all.

ASTRAGAL

THE SCOTTISH LEGAL BUILDING, GLASGOW

DESIGNED BY WYLIE, WRIGHT AND WYLIE

THE Scottish Legal Building, the new headquarters of the Scottish Legal Life Assurance Society, at 95 Bothwell Street, Glasgow, as it now stands completed, follows very closely the lines of the original design submitted in the public competition held four years ago.



This view of the end of the building fronting to Blythswood Street gives an impression of its size. It occupies an oblong island site that slopes steeply, and contains two basement and seven floors above the ground level, which is largely devoted to shops for separate letting.

The site is approximately rectangular, measuring 247 ft. by 108 ft., and the height of the building varies from 120 ft. high at the south-east corner to 100 ft. high at the north-west corner, owing to the difference in levels of the streets.

Large shops and saloons occupy all the ground floor, except for the main entrance hall and staircases. Above this are seven floors of offices; a main block 60 ft. deep, extending along Bothwell Street, and end wings 37 ft. wide, fronting the side streets. This leaves an open area 150 ft. by 43 ft. at the back, so that all the offices and shops receive the maximum amount of daylight and fresh air. The Society occupy the whole of the top floor and half of the sixth floor as offices, and a large area in the basement as storage for filing; the remainder of the building is let to tenants.

In the basement, in addition, there are a garage and motor showroom. A sub-basement, stretching along the lane at the back and the whole length of the site, is divided up into safe deposit vaults for tenants, with the heating chamber, Corporation Electricity Department sub-station, vacuum cleaning plant room, and electricity main switch room at the west end. On the roof are situated the caretaker's house, lift machinery rooms, automatic telephone battery room, and water supply tank rooms.

In order to comply with the Glasgow building regulations, fireproof division walls divide the building into compartments of approximately 350,000 cub. ft., with double fireproof sliding doors at all openings through these walls.

Owing to the nature of the subsoil, a piled foundation was found necessary. Some 150 precast reinforced concrete piles, averaging 13 ft. deep, were used over the larger northern area, and about 200 reinforced concrete pressure piles, averaging 40 to 50 ft. deep, over the southern area, where running sand was encountered. The foundations consist of a combination of reinforced concrete rafts connected to the pile caps and steel grillages at the column bases. The raft supporting the outside walls and columns also acts as the base of a reinforced concrete retaining wall which surrounds the site.

The structural system consists of a steel frame which supports all floors, fireproof partitions and outer walls, necessitating compound girders of large sections due to the wide spans, internal columns being reduced to a minimum.

The outer walls to street fronts are of Blaxter stone, a cream-coloured sandstone from Northumberland, with a base of polished Inverawe (dark grey) granite, and the shopfronts of honed Kemnay (light-grey) granite. The infillings surrounding the windows at the main order from second to fifth floors are of cast iron. The back elevations have cream-coloured facing brick, with patterns at window breasts formed with brown-glazed brick to give relief.

The exterior ornamentation makes extensive use of symbolical motives representative of the Society's activities. There are four sculptured stone panels on the first floor of the Bothwell Street elevation. They represent, respectively, Industry, Prudence, Thrift and Courage: the motto of the undertaking is "Prudence and Thrift." Similar emblems appear as pilaster caps; in the design of the rising gates to the main entrance; and in the panelled and carved board room.

The floors are of reinforced concrete, with patent lathing to support the plaster ceilings. The inside face of the outer walls is lined with 2-in. composition blocks, and all internal office partitions are of the same material, 3 ins. thick. The finished surface of all inside walls and partitions in the offices is plaster.

The windows, which have been kept as big as possible, are generally of bronze with plate glass.

A portion of the large bronze windows and cast-iron panels extending from second to sixth floor levels of the Bothwell Street front. Similar windows are central features of the two ends of the building.

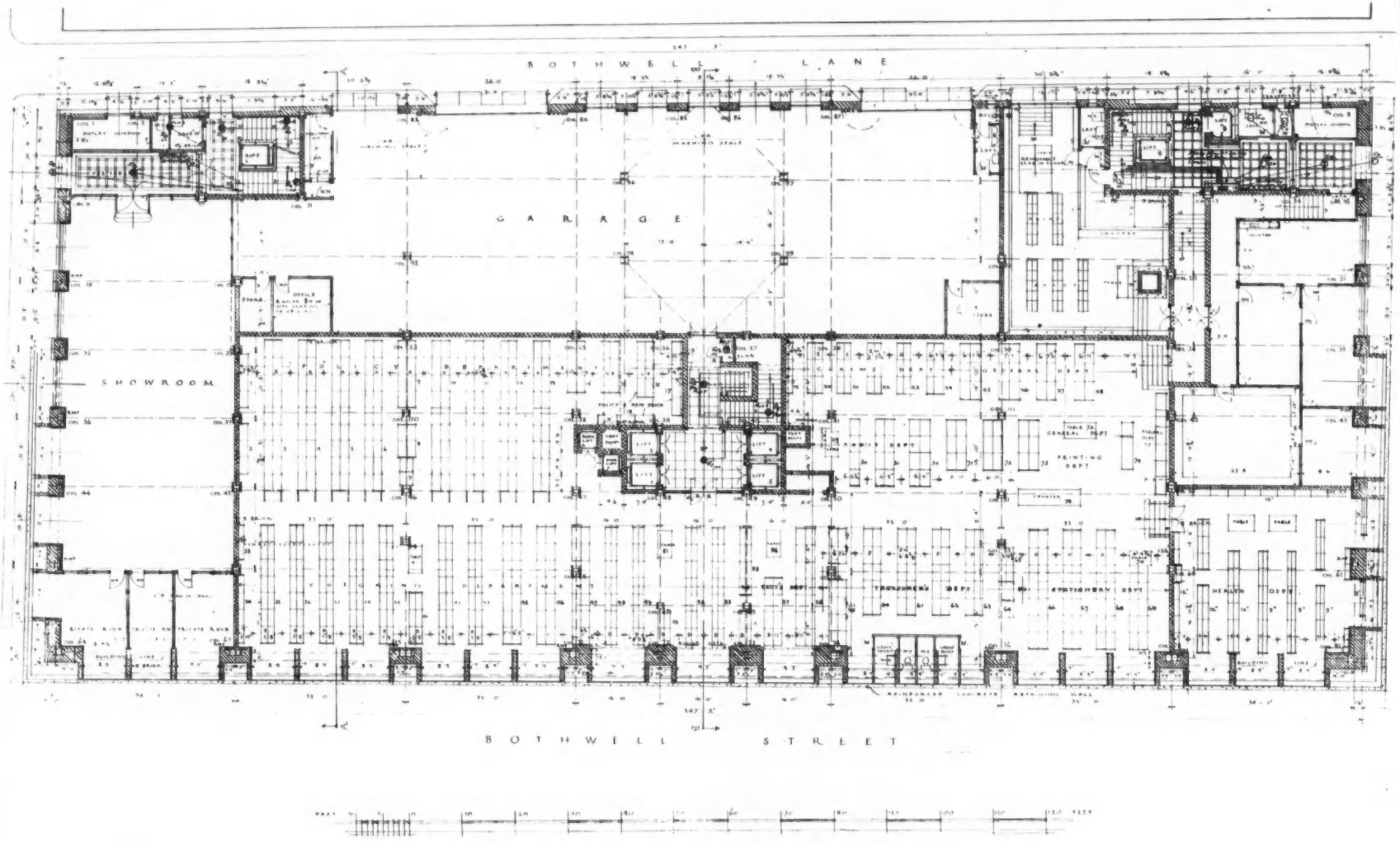
Scottish Legal Building, Glasgow.] [*By Wylie, Wright and Wylie.*

The main entrance, with its triple arches, is in the centre of the principal façade to Bothwell Street. Above it is the coat of arms of the Assurance Society, based on emblems of Rampant Lion, Unicorn, Visor, and Mantling.

For the office floors karri wood from Australia has been laid, nailed to bearers set in bituminous concrete.

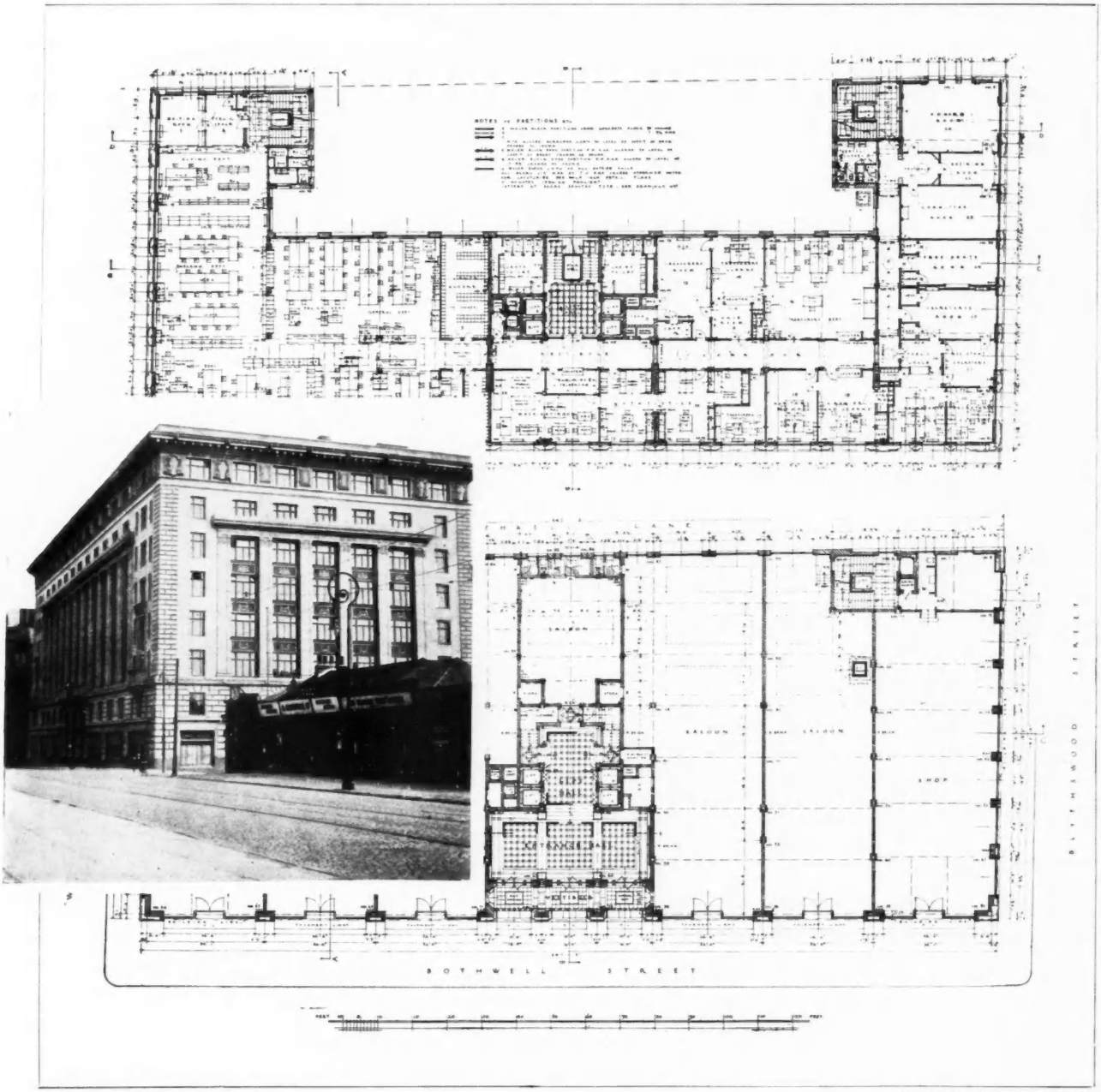
The main staircase is finished in marble — Forêt de Brousse treads and risers, Blanc Clair margins and stringers, and a dado lining on the walls of Lunel Rubane (purplish veined, grey-buff) with bands of Pacilo (dark green). The side staircases have Hopton Wood treads, risers and paved landings, with terrazzo margins, stringers, and dado on walls in various shades of green with black lines. The main entrance hall and lift halls at each floor have Forêt de Brousse paving and Lunel Rubane lined walls, with bands of Pacilo.

The woodwork throughout the offices generally is Borneo cedar, stained and varnished to tone with the doors, which are of African mahogany. In the Society's own offices the Borneo cedar finishings are french-polished, with very satisfactory results. For the private rooms, which are all panelled, a variety of hardwoods were used.



Scottish Legal Building, Glasgow.] [*By Wylie, Wright and Wylie.*

The basement plan. The slope of the site is downwards from Bothwell Street to Bothwell Lane at the back of the building; West Campbell Street bounds it on the left, Blythswood Street on the right. The showroom space shown is thus entered from the lower street level, like the garage adjacent, above which there is a recessed lighting area. The bulk of the space nearest the main front is devoted to office space for the Assurance Society; there is also a sub-basement, utilized by them for storage purposes, etc.



Scottish Legal Building, Glasgow.] [*By Wylie, Wright and Wylie.*

Plans of the ground and seventh floors; and a view from Bothwell Street. Apart from the main entrance, halls and staircases, the ground floor is planned to be let off as shops. Much of the Society's office space is provided on the seventh floor, which contains, in addition, board, committee, president's and secretary's rooms; the intermediate floors are also to be let off.

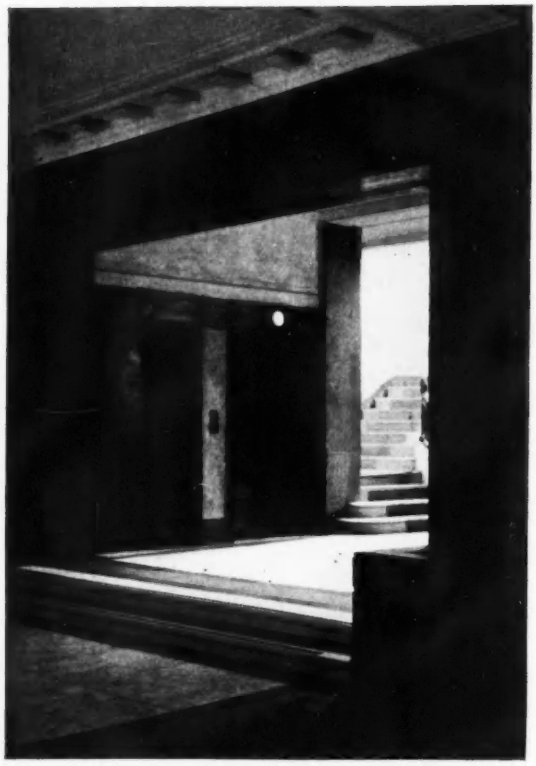
The board room is in English walnut, finely figured ; the committee room, corridor, and ante-room to board room in Indian laurel ; the retiring room in brown pollard oak, with a distressed finish; the treasurer's and secretary's rooms are in Cuban mahogany; and the assistant secretary's room is in Austrian wainscot oak.

Special furniture in the same woods, to harmonize with the rooms, was designed by the architects. Elements of the society's coat of arms, namely, Rampant Lion, Unicorn, Visor, and Mantling, have been used in the cast-iron panels of the windows at the third, fourth and fifth floor levels on all the streets. The coat of arms appears in its entirety over the central doorway in Bothwell Street.

There are seven high-speed, self-levelling lifts, all having solid bronze cars, and two-speed entrance doors, operating automatically by pneumatic action.

The heating installation is on the differential vacuum steam principle. The steam is pumped through piping to radiators with condense return to the boilers, which are oil-fired. The temperature is thermostatically controlled. An independent boiler, also oil-fired, supplies an adequate flow of hot water to all the lavatory basins throughout the building.

C



A view in the main hall, looking across towards one of the ground-floor lift and stair units.

The marble-lined staircase of the adjacent photograph, running up from the lift hall.

Scottish Legal Building, Glasgow.]

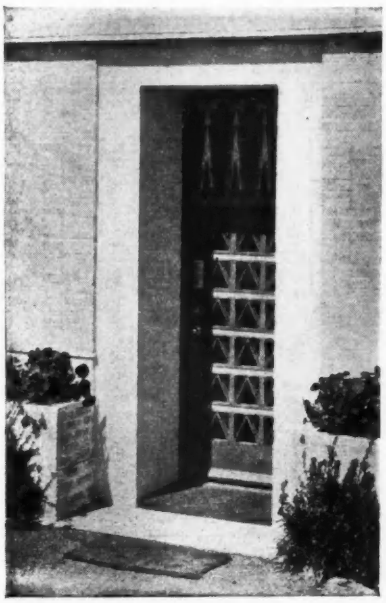
In the board-room on the seventh floor, showing the chairman's seat, with the carved coat of arms above it.

[*By Wylie, Wright and Wylie.*

A typical lift hall on one of the upper floors. Marble is extensively employed for lining and decorative purposes.

HOUSE AT CHORLEY WOOD, HERTFORDSHIRE

DESIGNED BY WELCH, CACHEMAILLE-DAY AND LANDER

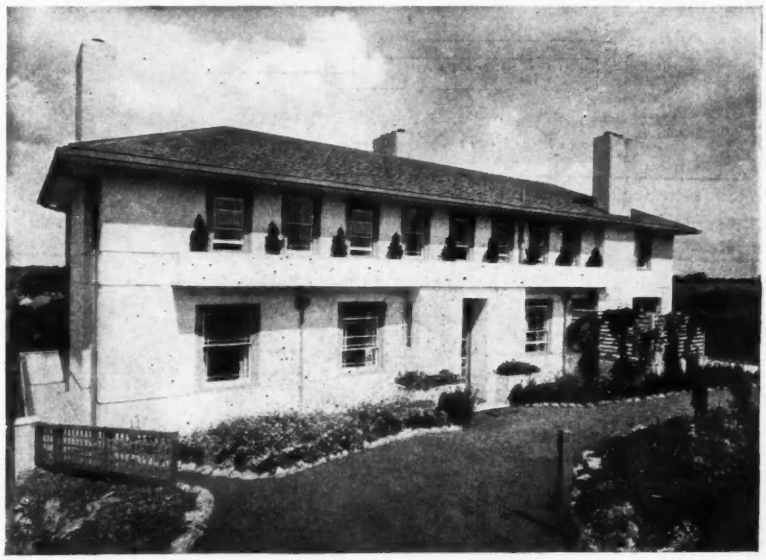


The main entrance leading to the hall.

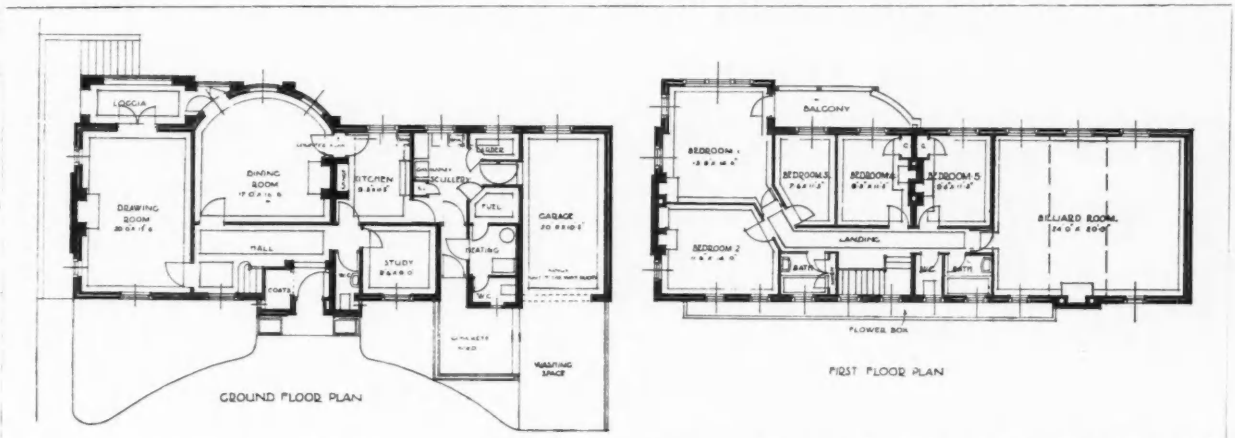
THIS house is situated on a steeply sloping site overlooking Chorley Wood Common. The main front faces almost due south, and the back, which enjoys the better view, has a northerly aspect, the site sloping from south to north.

There were several particular points which had to be considered in the planning. One, of course, the usual question of economy and obtaining the maximum amount of accommodation in the smallest possible cube; another, the ever-present labour-saving question. But perhaps the most important of all was that of arranging the rooms so that as many as possible obtained the view over Chorley Wood Common and yet received a certain amount of sunshine.

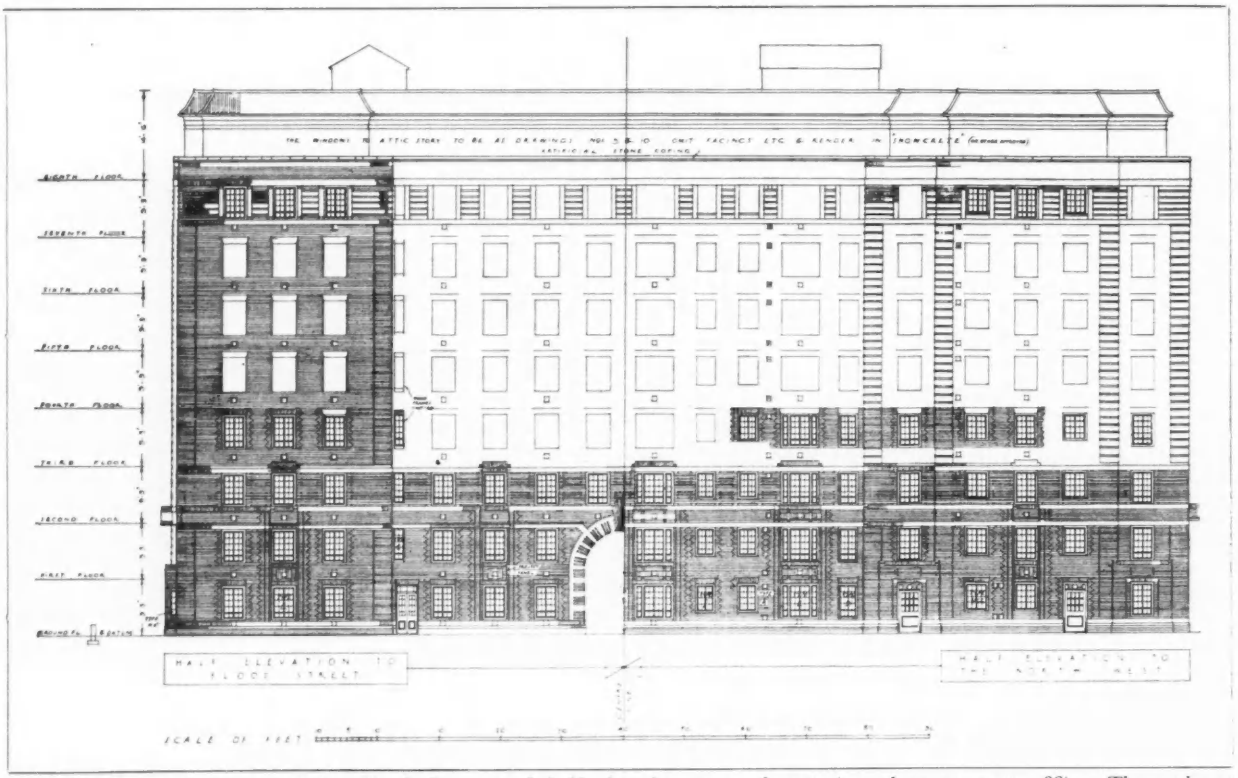
The north front. The steps shown lead down to the garden, which is laid out in a series of terraces. Access to the house is by stairs behind the wall on the right.



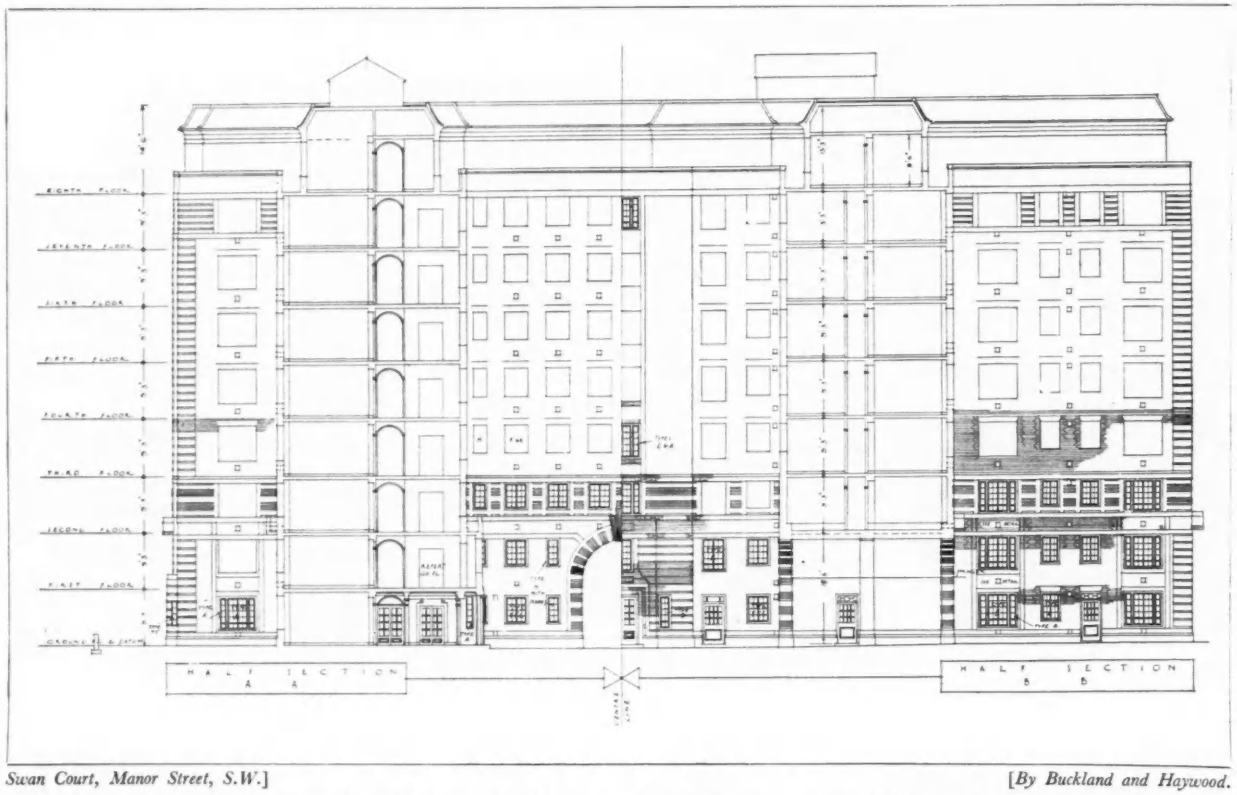
Looking along the main front. The walls are of rustic Fletton bricks, lime-whitened; and the roof is covered with Westmorland slates. The garage is on the extreme right.



Ground- and first-floor plans. The dining-room and kitchen are so planned that meals can be served comfortably with, or without, a servant in attendance. The house is centrally heated; the bedrooms and billiard room are also fitted with gas fires and radiators.



Half elevation to north-east, facing Flood Street, and half elevation to north-west (see plans on page 466). The archway leads to a central courtyard containing the two entrances to the flats and studios. The doorways shown lead to the maisonnettes.



Swan Court, Manor Street, S.W.] [*By Buckland and Haywood.*

Half sections taken from the same points of view as the elevations reproduced above. The architects' detail drawings of the archway and the main entrances to the flats in the courtyard appear on one of the special supplements accompanying this issue.

FLATS WITH ARTISTS' STUDIOS

DESIGNED BY BUCKLAND AND HAYWOOD

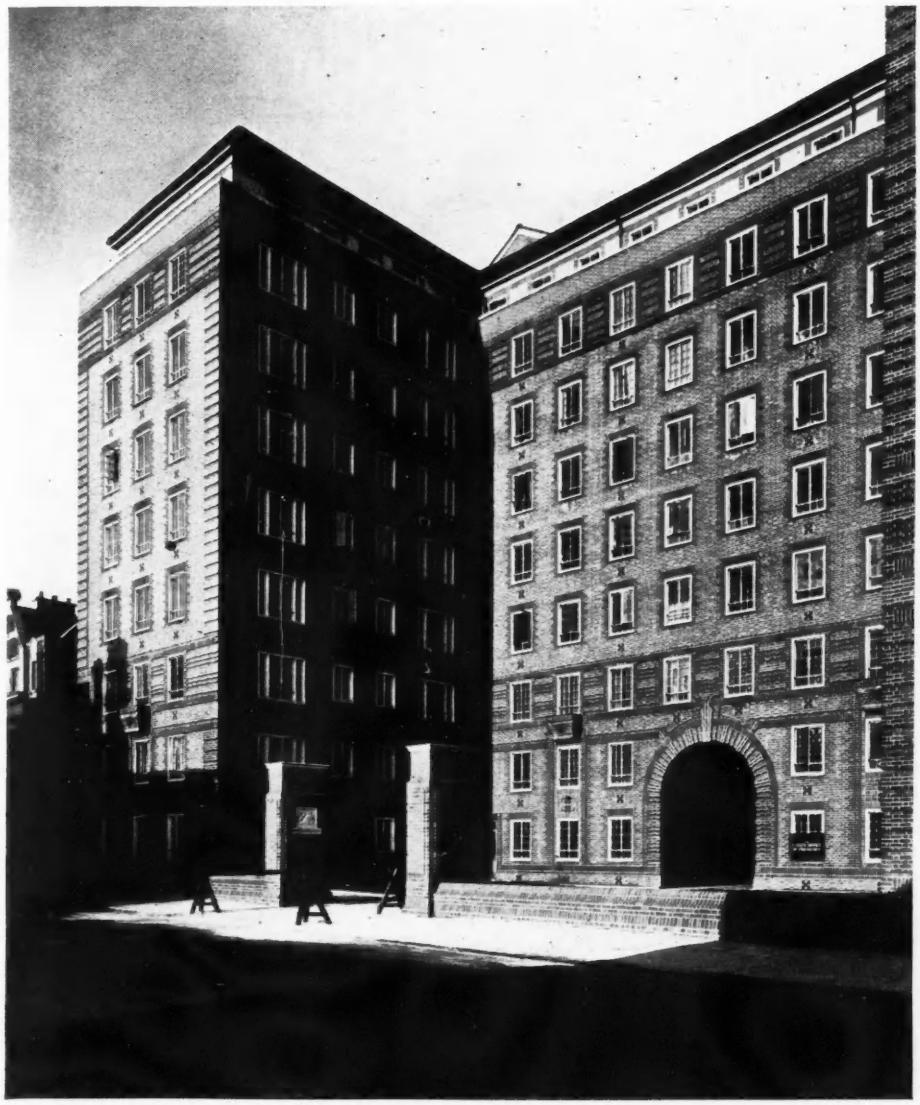
SWAN COURT undoubtedly is one of the most interesting blocks of flats erected in London for some considerable time. With the exception of the upper story of white cement and a small artificial stone coping, the elevations are built entirely of brick of a pleasant plum colour, bricks with bold rusticated being used for the quoins, and bricks with a dragged face for the window surrounds. Notable features of the exterior include the arched heads of the main entrances, the porches and window boxes—all in brick of the same plum colour.

In planning, the building is unusual, if not unique, and even a most cursory examination of the accompanying drawings shows the intensity with which the architects have investigated the needs of the town dweller, and particularly those peculiar to an artistic quarter, such as Chelsea. Thus, there are flats for the bachelor; flats and maisonnettes for the family man; and studio flats for the artist.

The building stands on a site covering a considerable area between Manor Street and Flood Street, close to Chelsea Town Hall, and a few minutes' walk from Chelsea Embankment. It is planned as a quadrangle about an inner courtyard, and the central part of each of the two street façades is deeply recessed to form a projecting block at each corner. This type of plan has enabled the architects to include a forecourt on each street frontage, beyond which is an archway leading to the courtyard.

In the building itself are 104 mansion flats, 24 maisonnettes, and 16 studio flats.

The maisonnettes are the most interesting feature of the plan. They are believed to be unique in London, and give the occupier all the delight



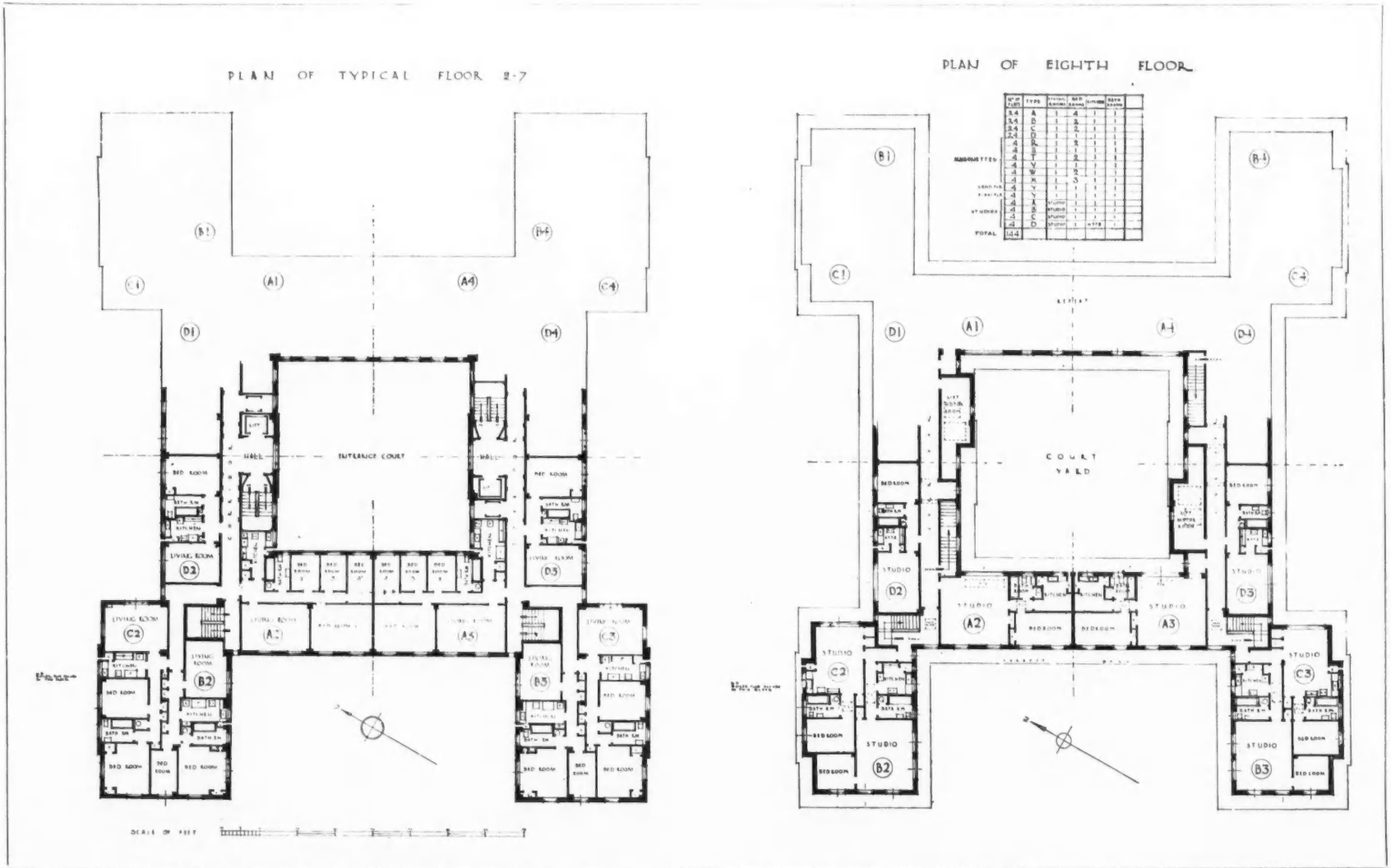
Looking from Manor Street into the forecourt and towards the archway leading to the central courtyard. The other main façade facing Flood Street is of similar design.

Plans of the ground and first floors. The maisonnettes are planned with the entrance hall, living-room and kitchen on the ground floor, and the bedrooms and bathroom on the first floor. The inclusion of maisonnettes is unique in London. On these two floors also are flats with one living-room, bedroom, kitchen and bathroom.

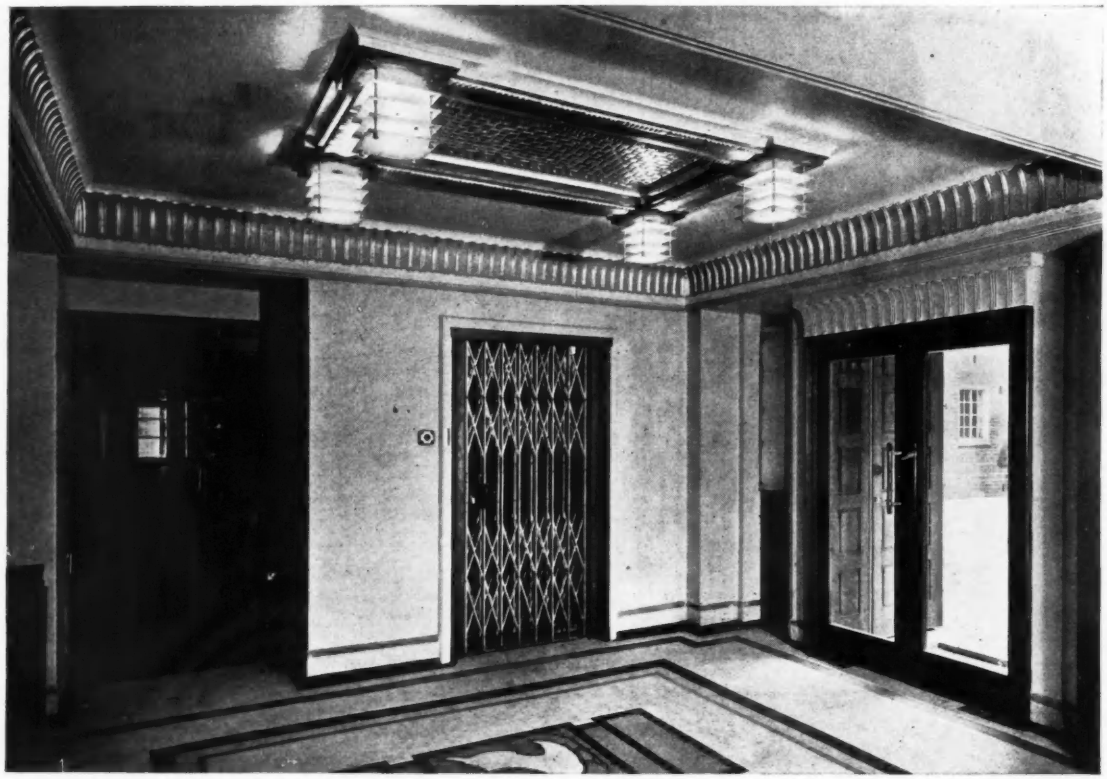
FLATS WITH ARTISTS' STUDIOS

DESIGNED BY BUCKLAND AND HAYWOOD

SWAN COURT, MANOR STREET, S.W.

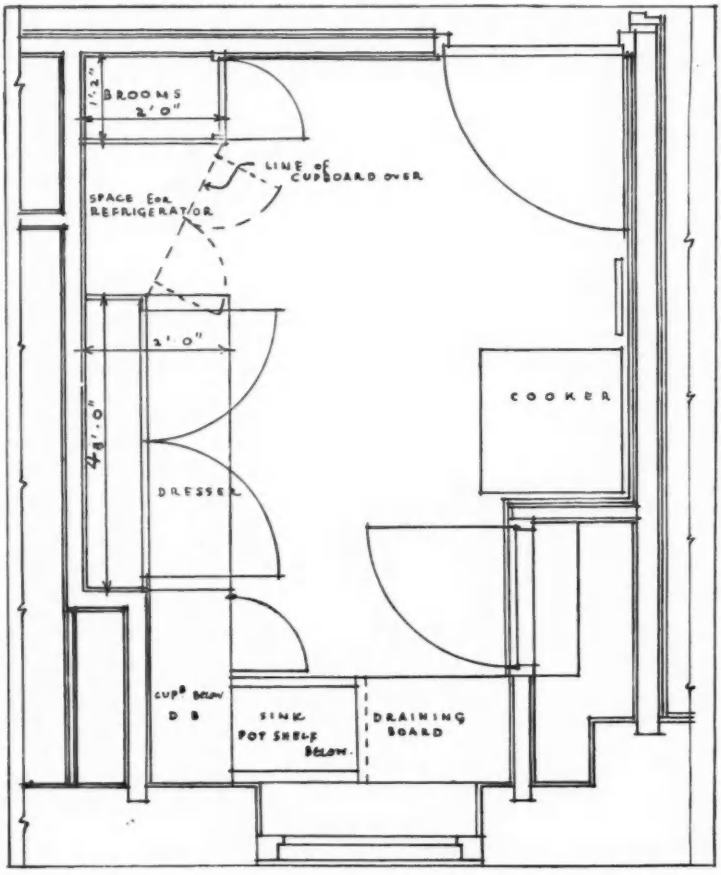


Plans of floors numbers two to seven, and number eight. There are flats of four different types from the second to the seventh floors inclusive. Each flat has an entrance hall, living-room, kitchen and bathroom, the numbers of bedrooms varying from one to four. On the eighth floor are one-bedroomed studio flats of four types.



Swan Court, Manor Street, S.W.] [*By Buckland and Haywood.*

The main entrance halls from the courtyard have light-green walls with a green and gold cornice. The ceiling decoration is in gold relieved with red and green, and has amber light fittings. On the floor, in cream and bright colours, is the figure of a swan.



Plan of the kitchen fitments in the one-bedroomed flats and studio flats.

of a small house with the advantages of a flat. Each maisonnette is planned on the ground and first floors, and has its own entrance and staircase. The maisonnettes are of six types: each has an entrance hall, living-room, and kitchen on the ground floor, but the number of bedrooms on the first floor, where also is the bathroom, varies from one to three.

Everything appears to have been done to make the flats economical to run and labour-saving. Among the more important blessings conferred upon the tenant are ample cupboard accommodation, refrigerators in the kitchens, in addition to larders, electric light, central heating, constant hot water, and electric power points for electric radiators, vacuum cleaners, etc.; gas cookers can also be fitted. The interior decorative finish of the flats is left to the reasonable choice of the tenant.

The rents range from £160 to £250 per annum, inclusive of rates and taxes, and there are no extra charges.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xx

AN ARCHITECT'S WIFE

BY KARSHISH

(H. B. CRESWELL)

THIS writing is an account of my career as an architect only; but I shall not deviate from that course by speaking of my marriage, for it was that, more than any intrinsic capacities in myself, that established me in practice, gave me an entrenched position in life, and found me fruitful opportunities to show what stuff might be in me. I do not know how it is with other architects, but although few can be so advantaged by their marriages as I was by mine, I am convinced that a certain kind of woman can be the making of a certain kind of man, if they are rightly assorted.

Mr. Bernard Shaw has said somewhere that no married man can write truthfully of women unless he has quarrelled with his wife; and Garston used to insist that no man had any right to speak of a woman except as he would of his sister. I think both these dicta, in a manner, true; and I am also aware of the nauseating flavour any taint of uxoriousness gives to the subject. These difficulties I must make the best of; and as Nancy died when we had been man and wife only eight years, I am able to look back on our past with the detachment of one who writes of others.

Nancy was the best pal a man ever had; but the circumstances of our marriage were somewhat unusual, and I must say something of them. I shall —at the risk of banality—go straight to the point if I recall that, after we were married, she one day said to me :

" It was on the afternoon at the Talbots', when the chimney caught fire, that I thought to myself—if that man asks me to marry him, I will."

" I believe you made up your mind that I *should* ask you," I said.

" But you're not sorry, are you, Pidge ? "

" Pidge " was short for " Pigeon," and this also is much to my point; for I discovered—after we were married—that even before we had struck up a friendship Nancy used to speak of me to her friends as " The Pigeon "; and I happen to know that she announced our engagement to one of them by : " I am going to marry the Pigeon; what do you think of that ! "

I was thirty-two, and she a year older, and a widow. Captain Gardriffen had been killed in the South African War. It sticks in my mind as most odd that I can exactly remember, to the smallest detail, the occasion when I first casually saw the woman who in such a queer way was to become my wife.

I was walking up Cow Street one sunny morning when a white-painted governess-cart, with a long-legged chestnut pony in the shafts, drove up to the curb thirty yards before me, and the lady in it reached across the path, beat on the window of a shop with her whip, and brought the grocer running to her like a dog from its kennel. This lady was small, with dark hair, blue-grey eyes, bright complexion and short oval face. She had rather a beaky, hard-bitten look, and thin lips that smiled in a curious self-satisfied way, and she did not strike me as in the least beautiful; but her air of vivacity attracted me, as I well remember, and her personality was strikingly expressed by the unconventional dark, tailored, tweed costume, and hunting stock, and cloth hat, with a black-cock feather in it, which she wore. This was Nancy—except that the smiling expression of the lips was not due to complacency, but to a mind that found nothing in life to abate cheerfulness and good humour.

We became acquainted that same summer at lawn-tennis parties. Nancy was extremely active, and had a system of scientific lobbing all her own; and I one day noticed that she was mischievously directing these tactics to my individual frustration. This broke the ice between us, and we met afterwards with the social intimacy that allowed—even in those days—banter and personal chaff. Looking back, I got the idea that Nancy first esteemed me for the ease with which she could pull my leg.

I had better say here that not only had I no intention of marrying, but that the idea of marriage never occupied my mind and, except that I did not formulate the thing, it even was my intention never to marry. This state of affairs was due to Frances. Frances' home was at Yaw. We fell in love—as it is called—when I was twenty-four, and she was seventeen. I could only see her when I went home —which explains my unexampled dutifulness to the parental roof; and I could not write to her, for such things were, in the circumstances, considered " unheard of " in those days—and, besides, our attachment was clandestine.

Then, one day, my father suddenly awoke to the fact—which I could have informed him of two years before—that Frances was not " safe." I was made aware of this by sudden obstacles to our meeting, and by my being plainly regarded at home as a delinquent who only escaped obloquy because he was also a fool. The unhappiness of nursing forlorn hopes was replaced by that of seeing them gradually dissipated. Frances grew, under pressure, thoroughly to know her own mind—which turned out to be also her mother's; and finally married very well indeed.

It would have been a disaster if Frances had waited for me, and I fancy I realized it; but for six years my energies had been dissipated, my powers of concentration diminished, my purposes made wayward, and my judgment, taste, and even my sanity, warped by extremes of feeling which ranged from ecstasies of elation to the darkest despair. That was what love had done for me, and I resolutely turned my back upon it as upon a delusion and a folly.

I believe now that it was a small episode at a subscription dance at Nollingborough Town Hall that settled my hash, though I was quite unaware of any change of heart at the time. I had never before seen Nancy in full fig, and I was so much astonished as to be even a little discomforted. She had the kind of presence without which the most beautiful woman fails of effect. It seemed to me she was the most distinguished-looking person in the room, and we only got back upon our accustomed footing of unreserve when, after our first dance, I was leading her out of the hall.

At one end of this hall there was a platform which had been set out with armchairs, where the chaperons, who encumbered such occasions thirty years ago, sat embowered in palms. Conspicuous among them was an old gentleman, the hereditary family solicitor of the neighbourhood's gentry; and as Nancy and I passed across the floor under his eye, we walked behind one of his daughters, who were conspicuous in the town for sporting the newest and naughtiest fashions, and for being, on all occasions, one notch up on every other girl in the place. My eye was caught by the pretty neck and shoulders before me, and my attention held by the extremely low-cut bodice, skimpy skirts, and other novel devices for man-slaying, when Nancy whispered :

" Poppa saw you ! "

I was at a loss until I met her mischievous glance. As I say, I fancy that the moment settled my hash; and the thing was so exactly characteristic of her, and I so delightedly receptive of it,

that I might well have then discerned a secure ground for devotion to her; but, as a fact, I believe I thought nothing more of her after I left the place that night.

It was some time later that I was even curious enough to ask our common friend, Mrs. Talbot, about her. She lived, I was to discover, in a tiny house hidden in the country, with a certain Miss Pauline Salsify of mature years, who sought, with only partial success, to dissipate virgin vinegar by horse exercise. She and Nancy shared one hunter, and although neither of the ladies got all the hunting she wanted, there is no doubt the horse did. That Nancy was able to keep house with "P. S." is proof of the enduring equanimity and sunny good-nature I was to know so well. I never became aware I was fond of her until after I had ceased to wonder at the startling parallelism of our minds, and when her humour and discernments had become a treasured possession for me, without my being aware of it. I found out how things were with me when she went abroad for three months after taking a heavy toss that destroyed her nerve.

She was the best pal a man ever had, and we were supremely happy. Of that I have nothing to say; I have given this account of her and of the circumstances under which we became life-partners for the purpose of introducing the subject of her education of me as a practising architect.

It was while we were still engaged that she said to me one day: "You know, Pidge, you can't afford to travel third-class."

I did not at once gather her meaning. It was ninety-one miles to London from Nollingborough. I went up more than once a week—on an average—and travelled third-class, and sometimes by the Wednesday cheap day excursion. Nancy realized that in doing this I grouped myself with persons of no account in the place, and that I ought to associate myself with the well-to-do, and adopt the outward signs of affluence and prosperity. I found she was perfectly right in this; for when I travelled first-class I was at once aware that I set a further distance between myself and the detestable associations of the town, and drew nearer to persons with whom I had social affinity. I also met agreeable acquaintances on the train and hob-nobbed with men whom it was useful to know, and I was even introduced, in railway carriages, to those who afterwards employed me and who otherwise might not have done so.

"You can't make money unless you spend it." "People will not readily pay money to those who are in need of it: to earn money easily you must make people think you don't want it." "You will find people much more anxious to employ you if they think you are so busy you cannot attend to them, than if they think you are in want of work": these are some of the things Nancy said to me—taught me, in fact, for I have found them to be true; but she did not get them from any writings—although she read much—but from her amused observation of life and her acute discernments.

When I was thinking of becoming a Mason she demurred until I had found out who the members of the Town Lodge were; and she then vetoed the idea.

"You may console yourself that if there was anything of the least moment or interest in Masons' secrets, everybody would know them," she concluded.

It was, however, her guidance in more intimate and personal matters that most benefited me. After the bazaar, I had made some pretentious water-colours of local scenes—picturesque farms and villages—and had two of them exhibited in the window of a seller of cheap prints who was also a frame-maker and glass-cutter, with a placard I wrote myself: "Sketches by Bernard Whistlow, Architect: £5 5s. each." The shop was to get 25 per cent. commission on sales; but I sold nothing, though I substituted new drawings from time to time, to disguise that humiliating fact. My purpose, however, was not to sell, but to keep my name to the fore and fan the flame lighted by the bazaar.

Nancy shook her head at all this, however; she also disapproved of my singing in the church choir of the village where I lodged and, where, afterwards, we rented a small house; and she dissuaded me from singing at village concerts in the country round about. The explanation she gave me for her objection was: "You must not be parochial until you are in a position to patronize."

This is perfectly clear to me now, but I had some difficulty in understanding her meaning then. I had thought it a great stroke when I was asked to become a member of the church choir, and was pleased to find myself fast becoming a standard turn at "penny readings," and I had, at the time Nancy intervened, prepared myself with "Songs of Araby" and "The Devout Lover" in expectation of being asked to help at the big Nollingborough concert in aid of the Organ Fund. Nancy, however, would not hear of this. "It is not that you do not sing well enough," she said; "it is your style of singing and the kinds of songs you sing. If you accompanied yourself and sang *comic* songs—I mean ironic and insolent songs, like Corney Grain; or even hoarse-sounding modern German songs that people would only pretend to like so as to appear more musical than they were, it might be a different matter; but the songs you sing are too sentimental, Pidge, and you sing them far too earnestly—as if you were actually having the experiences you enact. You solicit your audiences like a professional singer: you will lose caste if you sing like that, and it is the only way you *can* sing. You must give it up."

I did give it up, and I have no doubt Nancy was right, for a few years later the idea of standing up and singing such songs as "The Pilot" and "The Midshipmite" would have made me wince.

Garston, who was devoted to music, must have had much the same idea of my performance, for he once very much annoyed me by introducing me to a stranger, one hilarious night in his diggings, by shouting:

> He'll sing thee rot from Araby
> And drivel from Cashmere;
> Stuff that I think
> Will strike you pink
> And make you stop your ear.

All the same, I was a popular success with my songs on village platforms.

Nancy, however, did not merely disapprove of my attempts to advance myself; she was also quick to seize ideas to the same end. One day, for instance, when we were in the town, I was returning to the trap in which she was waiting with a roll of brown paper I had just bought under my arm, when I met an acquaintance, a solicitor in the town, who said with jealous curiosity: "*You* seem to be pretty busy." I allowed him to think what he liked; but I happened to mention the thing to Nancy when I joined her, and she at once said: "That's a hint to *you*, Pidge"; and I formed the habit, from that day, of going about with a roll of drawings under my arm.

Another idea of hers from which I had great advantage was the setting up of a portfolio in my office. She said I ought to have an array of designs for all sorts of buildings that I could show to people as evidence of my attainments. Accordingly I set about making designs, in plan, section and elevation, of houses, churches, a cricket pavilion and so forth, which I kept, with perspective drawings and some of my sketches, in a great standing portfolio of mahogany and brass. I found it, as a practical matter, impossible to design without having to satisfy fixed conditions; and almost impossible to observe requirements which had no other justification than my own caprice, and accordingly—at Nancy's suggestion again—I lifted plans out of the back numbers of architectural journals and altered them to suit my fancy in improving on their elevations. This

made the task easy enough, and the result was some striking designs; and as it amused me to exercise myself in neat draughtsmanship, I had a variety of interesting buildings, beautifully rendered, to display to clients or to acquaintances who came to the office or were brought there by Nancy, and who noticed the portfolio and were curious about it. I never, of course, said anything deliberately to lead anyone to suppose that the buildings had been carried out. Our purpose was to let it be known that I was competent to design and carry out such works, and I had plenty of evidence that Nancy's forethought and my industry was not wasted.

For a long time Nancy used to give me continual surprises. The lessons at our church were read by the chief engineer of the Eureka Plough Works, and when I heard, privately, that he was leaving the place to take up other work I found no difficulty in getting invited by our rector to fill his place at the lectern, and came in high spirits to Nancy with the news. She, however, laughed at me, burlesqued what she pretended to think my manner would be, and ridiculed the whole idea. When I could get a serious reason from her, all she said was : " No one, except a clergyman, can read in church without giving up all social pretensions, *unless* he is able to condescend to the Scriptures—which you could not do."

I could not make head or tail of this at the time, and though I agree that her decision was wise, I cannot even now perfectly understand the reason she gave for it.

Another thing that puzzled me was her increasing habit of making fun of my pretentions as an architect before acquaintances. " This husband of mine is crazy about church spires : I am always afraid he is going to begin climbing up one;" " Nothing will satisfy this architect of mine but to see the Royal Academy lined with his drawings;" " I am afraid to look at my husband's houses for fear they should wobble," and things of that sort.

I once expostulated when she had made me look particularly foolish.

" Why, you stupid man," she cried, laughingly, " how else can I call people's attention to you and your work a dozen times a day ! I should bore everybody if I spoke seriously of your doings, and they would also think I was trying to boost you. Don't you realize that the mere fact of my laughing at you carries conviction of your success ! Everyone will suppose that I could not make fun of you if you were not far above being damaged by it. You must be careful not to appear pipped; you must try to smile and be easy and tolerant of my nonsense."

It was, however, more by her intricate social manœuvrings that Nancy built up my fortune. This part of the story is closely linked to my work and my relations to my clients and the widening of my connection, and as the emulation Nancy inspired was the chief preoccupation of my life in those active years, and is an object-lesson—as I think—in the methods by which secure establishment in a general architectural practice is to be attained, I shall give some account of it.

NEXT WEEK—XXI : I QUARREL WITH MY PARTNER

The previous instalments appeared as follows :

May	27.	i : I am Articled.
June	3.	ii : Episodes of Pupilage.
June	10.	iii : Episodes of Growth.
June	17.	iv : My First Job: The Sewer.
June	24.	v : My First Job: The "Pipes."
July	1.	vi : I Turn Clerk of Works.
July	8.	vii : Bradshaw & Son: Builders.
July	15.	viii : Joe Richards: Foreman.
July	22.	ix : Trials of a Clerk of Works.
July	29.	x : A New Venture.
Aug.	5.	xi : The Resident Architect.
Aug.	12.	xii : An Architect's Early Gruel.
Aug.	19.	xiii : An Uphill Fight.
Aug.	26.	xiv : A Disaster.
Sept.	2.	xv : The Law's Majesty.
Sept.	9.	xvi : A Failure and a Success.
Sept.	16.	xvii : Private Practice at Last.
Sept.	23.	xviii : Provincial Practice.
Sept.	30.	xix : Forging Ahead.

LETTERS FROM READERS

Art and Industry

SIR,—I tried recently, in a town of about a million inhabitants, the experiment of holding an exhibition of examples of wallpapers, fabrics, carpets, electric fittings, and ironmongery designed by Professors Fahrenkamp, Wach, Breuhaus, Poetter, Harkop, Nany, Kleinhempel, Kaufmann, Gropius, and Mendelsohn; also Bruno Paul and that remarkable guild—the Wiener Werkstätte.

All the local architects, and 75 per cent. of the painters and decorators were circularized, as well as the general public. To my knowledge, no architects or decorators attended the exhibition, but only members of the general public and three students of the local art school. So much for the value of exhibitions. The people most concerned in the use of beautiful materials simply could not be bothered spending half an hour to visit it.

Nothing shows more clearly than these German, Austrian, and Swiss designs how immensely in advance Continental design is of our own, and the tremendously important position the architect holds in the eyes of the Continental manufacturer. The beauty of colour, and the sane simplicity of designs used by these architects, makes British wallpaper designs appear crude and dull in contrast, and the uninspired work of hack designers.

At present our designers, if working on modern lines at all, are guilty of copying the worst of crude French design. Original and creative minds seem to be absolutely divorced from our manufacturers' draughting-rooms. Undoubtedly, a start will have to be made at the source, which, I suppose, is the various art schools throughout the country. This will mean the introduction of new teaching methods by men who spend some weeks in every year visiting the various guild centres throughout Europe, and studying the methods of training and textile production which are employed abroad with such success.

At present the product of the art school has usually about as much idea of modern commercial design as the chief of the unenterprising firm whose staff he joins. W. A. R. STRINGFELLOW

Will the Robot Come?

SIR,—I was extremely interested in the report of Mr. John Gloag's lecture on " The Modern Movement in Design and its Effect on Home Decoration of the Future."

His visualization of a flat of 1960, with its " clock, thermometer, radio dial, telephone dial and other dials concerned with the services with which this flat of the future would be connected," is certainly a clever representation of what the future of functionalism may be like. To my mind, however, he seems to have omitted one vital point in his flat of the future—namely, the substitution of a Robot for the ordinary servant ! R. U. R.

Loamy Sand

SIR,—We have read with interest your article on loamy sand in the JOURNAL for September 9. We have for some years used a mixture for cement mortar of four parts sharp sand and two parts loamy sand to one part of cement, and we have found that this mixture makes a mortar as hard and tough and strong as any mortar could possibly be. In fact, we changed to this mixture some years ago because mortar made with sharp sand only, in addition to being very " short," and consequently difficult to manipulate, had a tendency to flake and rub off when set.

The chief objection of your authority " W. A. D." to loamy sand seems to be that it makes the mortar easier to manipulate and so saves the builder time and money. This cheapens the work for the client and therefore does not seem to us to be a sound objection.

H. C. LIST

FIRST PRIZE: PERCY BOWEN.] (Pencil: 8½″ × 13″)

Chepstow Castle and the River Wye, Monmouth.

SECOND PRIZE: E. B. MUSMAN.] (Pen and bistre: 12½″ × 8¾″)

Coltishall Mill, on the River Bure, Norfolk.

THE SEPTEMBER HOLIDAY SKETCHES COMPETITION RESULT

THE last of this year's three Holiday Sketches Competitions, which closed in September, was highly successful. It produced no fewer than 104 sketches, submitted by thirty-four entrants. The standard of execution in various media was well maintained; greater discrimination might, however, have been used in choice of subject. This consideration has carried weight in the adjudication.

The first prize of ten guineas has been awarded to "Charlton's" pencil drawing, reproduced on this page. He is:

PERCY BOWEN,
63 Westbourne Park Road, W.2.

For the second prize of five guineas choice has fallen on the pen-and-wash drawing also published here—one of a number, mainly in bistre, sent in by "Gaff," who proves to be:

E. B. MUSMAN,
7 Carteret Street, Westminster, S.W.1.

One competitor who was in the running had to be disqualified for not having used motto labels of the appropriate date.

A selection of the present competition drawings appears on the facing page, and it is proposed to publish others from time to time.

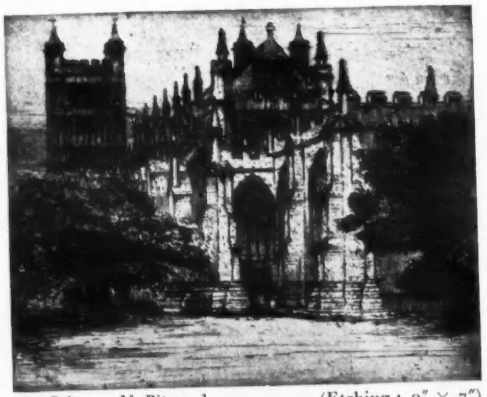
In again congratulating all competitors on their enthusiasm, the results of the two sets, of three competitions each, held this year and last, may be summarized. Last year weather conditions in England were anything but ideal; this year, unfortunately, they have been even worse. Yet the two years have produced not far short of 450 drawings from nearly 150 competitors, a state of affairs that is highly gratifying to all concerned.

THE SKETCH CLUB

THIRTY-NINTH SESSION

By J. Maxwell Scott.] (Pencil : 5½″ × 8½″)

Morocco Close, Edinburgh.



By Primrose N. Pitman.] (Etching : 9″ × 7″)

Exeter Cathedral.

By E. Maxwell Fry.] (Conté : 10¾″ × 7″)

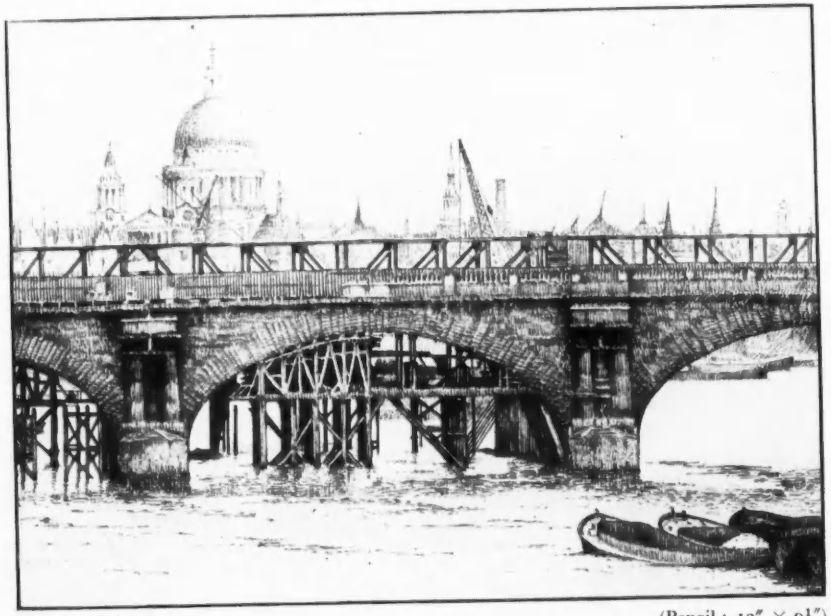
Hampton Court from the Long Lagoon.

By J. Maxwell Scott. (Pencil : 5¼″ × 8½″)

Victoria Street, Grassmarket, Edinburgh

By H. D. Wreford.] (Water-colour : 21″ × 13″)

Antwerp.



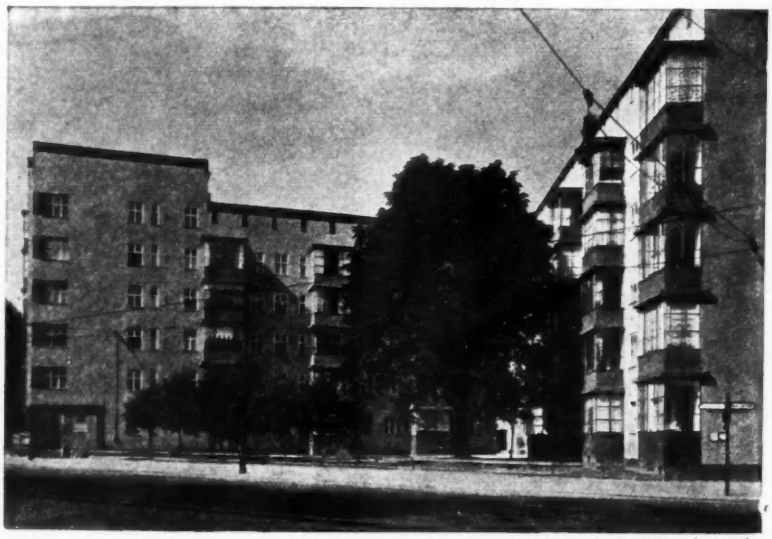
By G. McKinlay.] (Pencil : 13″ × 9½″)

Waterloo Bridge and St. Paul's Cathedral.

LITERATURE

BERLIN HOUSING SCHEMES

ONE of the effects of the post-war troubles of Germany has been to elevate Berlin from a provincial capital — which happened to be the centre of the Reich Government and was a little looked-down on by such towns as Munich and Dresden—to a world-city. Its population increased enormously and the housing shortage became acute. As a consequence the post-war years, and particularly the years 1927–1930, witnessed a positive orgy of building and the creation of entire new suburbs composed of great flat-dwellings. This orgy has now spent itself and, indeed, over-reached itself, as the authors of this work complain, inasmuch as in large areas of pre-war Berlin living accommodation can be had at a very low rate, rendering the financial management of these huge new estates a very difficult problem.



[*Mebes and Emmerich, Architects.*

Block of dwellings in Schöneberg, Hauptstrasse.

[*Martin Wagner, Architect.*

The Britz housing scheme, Stavenhagener Strasse.

This period of feverish expansion is here described and analysed by Dr. Schallenburger, the director of one of the largest of the Berlin building societies, and Dr. Erwin Gutkind, one of his most distinguished colleagues and architects. The examples illustrated are taken from almost every suburb of the new Berlin and show a considerable variety, both in style and in quality.

In their preface the authors complain that enough attention has not been paid to a uniform

[*Bruno Taut, Architect.*

The Britz housing scheme, the buildings have been planned in the form of a horse-shoe surrounding a pool.

[*Erich Richter, Architect.*

The Tegel housing scheme, 38th and 39th streets.

style of building, but to English eyes there is a certain national similarity in most of the examples illustrated and greater uniformity would, from our point of view, lead to an almost intolerable monotony. The actual quality of the flat-buildings, too, varies very greatly.

Some of the examples in Prenzlauer Berg and Siedlung are extremely interesting, and should be very pleasant to occupy; others, such as some of the examples from Wedding and Köpenick, are regular "mietskaserne," tenement-like in the worst sense of the word, and would require a very strict municipal discipline to prevent them from developing into slums. It would

[*Walter Gropius, Architect.*

The "Siemens-stadt" industrial suburb, the Mäckeritz Strasse.

[*Erich Glas, Architect.*

An extensive block at Wedding, the Dubliner Strasse.

be interesting to know if the environment suggested the buildings, or if the buildings have created the mentality in, say, Wedding, which is one of the strongholds of the Berlin Communist party.

There is an article on the financing of these great flat-buildings by Kurt Rohloff, another director of the same building society—the Wohnungsfuersorge Gesellschaft. It goes into great detail on questions of upkeep and letting, and is illustrated by specimen balance-sheets. Another chapter discusses the question of whether the Berliner is housed above his means. It is decidedly pertinent today.

There are some interesting plans of the general arrangement of the buildings in the suburb showing the communal gardens, methods of approach, etc., and several plans of individual apartments. It is a pity that no plans are included of some single block to show the relative positions of the apartments within the main building. The photographic illustrations are good and include many buildings by architects well known in this country; to mention only a few, Bruno and Max Taut, Hans Poelzig and Walter Gropius.

It would be interesting to know for whom exactly this volume is intended. It is not produced in the style usually devoted to architectural works in Germany, and the price (Rm. 5,80) suggests that it is intended for a wider public. But surely the Berliner is not so sociologically-minded as to swallow all the statistics in the text as recreation?

L. F. E.

Berliner Wohnbauten der Letzten Jahre. By Jakob Schallenburger and Erwin Gutkind. Verlag W. & S. Loewenthal. Rm. 5.80.

ELECTRICAL DEVELOPMENT IN THE NORTH

THIS book, recently published by the Newcastle-upon-Tyne Electric Supply Co., Ltd., describes rural areas in Northumberland, Durham and the North Riding of Yorkshire, where agricultural prosperity and rural repopulation has followed electrification. The company supplies current to an extensive area on the North-East Coast, stretching from Alnwick to York. This book, therefore, contains a number of illustrations depicting electrified farms, dairies and villages, in addition to maps showing the distribution network.

The author refers to the early planning, in 1906, of the transmission network to which is connected today the largest industrial, domestic and rural load of any European power supply company. Difficulties which had to be surmounted are referred to, notably that of obtaining from British sources cables and switchgear suitable for the then unusually high pressure of 20,000 volts. Certain heavy power loads, such as those required for collieries, had to be provided for, and cables laid for those services by routes which would enable supplies to be given to intermediate areas where future demands were expected.

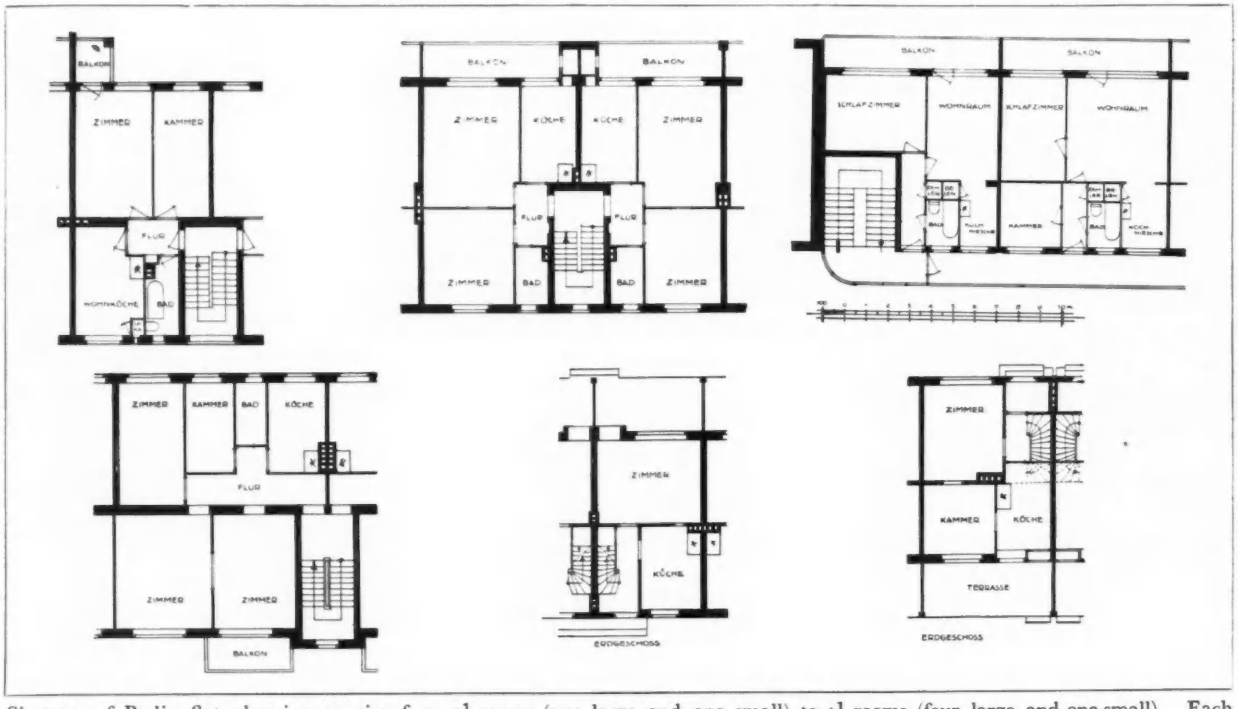
It is claimed that there are three factors which can bring new life and population to the country. The first of these is prosperous agriculture. Secondly, cheap and convenient transport to the business areas of cities and industrial districts. Thirdly, there must be belief that repopulation of the countryside, the revival of village industries, and the re-equipping of agriculture are vital things, and that it is a paying proposition to finance them.

A description is given of the travelling electric showroom which has been found particularly advantageous in districts where the population density did not justify the renting or erection of permanent premises. It visited over twenty villages last year. This showroom seats fifty people for lectures on housecraft and demonstrations of cooking by electricity, and contains nearly every kind of electrical apparatus used for domestic purposes, including cookers, fires, refrigerators and water-heaters.

The book is the first attempt to describe the early efforts in constructing transmission lines through sparsely populated districts. The national "grid" now being erected by the Central Electricity Board will help to develop other areas in the same way, and we may look forward to a revival of agriculture, based on an intelligent use of electrical power.

H. V. L.

The North-East Coast Countryside Electrical Development. By Holmes Waghorn. Newcastle-upon-Tyne Electric Supply Co., Ltd.



Six types of Berlin flat planning, ranging from 1½ rooms (one large and one small) to 4½ rooms (four large and one small). Each flat has a kitchen and bathroom.

QUESTIONS THAT ARISE

Profit on Metal Work

H. G. G. writes: "*I recently obtained an estimate for some metal work, and the following was included in the bill of quantities:*

	£	s.	d.
Provide the provisional sum of £300 for wrought-iron grilles, gates and railings which are to be supplied and fixed complete by a firm selected by the architect	300	0	0
Add for profit 5 per cent.	15	0	0
Allow for attendance upon specialist and for supplying scaffolding, ladders, and the usual facilities (cutting away and making good measured separately), 2½ per cent.	7	10	0

"*The percentages required for profit and attendance were priced by the builder. During the progress of the works the builder, who was a specialist for wrought-iron work, asked whether he could submit a price for this work. He did so and his price of £275 was accepted. In settlement of accounts I consider that I have a saving on the contract of £22 10s. i.e. on profit and attendance as well as the saving on the provisional sum. As the builder is getting a profit in his estimate of £275 for this work, surely he does not expect to make a second profit.*"

Unless in obtaining his price for the ironwork from the builder inquirer asked him to allow in his estimate for all profit, including scaffolding and attendance, incorporated in the three items in the bills, I consider that the builder is entitled to the benefit of all items.

It is reasonable that the builder will claim that his price of £275 was given in competition with the figure of £300, included as from the specialist to be appointed, but his profit was reduced in this figure to allow for the inclusion of profit gained by the other two items. Actually, his price is £275 plus 5 per cent. profit, i.e. £13 15s., and 2½ per cent. for scaffolding, etc., i.e. £6 17s. 6d., giving a grand total of £295 12s. 6d. G. E. D.

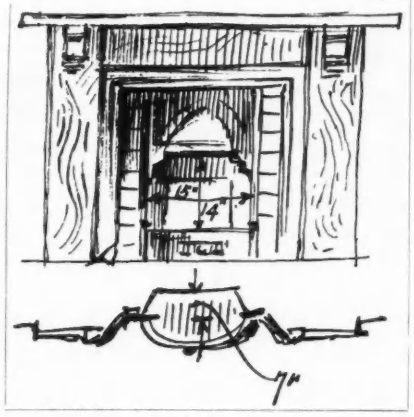
Smoky Chimney

E. I. writes: "*I should be glad of the opinion of your expert with regard to curing the smoky chimney in the following case: The fireplace (open coal fire) is on the first floor of a three-story house, and the flue is quite straight! The flue is carried up well above the ridge, and there are no neighbouring buildings of greater height. Every windy day the smoke is driven down (periodically) in gusts. The flue is almost vertical for its entire length, and is carried up from the fireplace opening for a total height of approximately 25 ft., where it is finished with an ordinary chimney-pot. Its width is presumably 9 ins. by 9 ins. The fireplace opening and dimensions can be seen from the accompanying rough sketch.*"

The possible causes of smoky chimneys are so various that it is always extremely difficult to pronounce a remedy, especially without seeing the actual circumstances.

From the information given, I should imagine that in this case the trouble is attributable to collections of cold or damp air somewhere in the flue. For this type of fireplace a slowly gathered flue is not desirable, as it leaves large pockets of cold air just above the fire, which stop the upward current of the warm smoke. Alternatively, it is possible that the chimney cap (as in many cases) is saturated, making an area of heavy damp air, which would assist any tendency to down draught. I should recommend the inquirer to look at these points.

It is possible that one of the patent anti-down-draught pots might give relief, but it would be better to diagnose the cause of the trouble and to remedy that. H. D.



See query on "Smoky Chimney."

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Road and Bridge Schemes Abandoned

THE economy programme of the National Government has resulted in the abandonment of certain road and bridge-building plans, including the Humber bridge scheme. This project has occupied a good deal of time in Committee, and was estimated to cost £1,750,000. The Ministry of Transport offered to contribute 75 per cent. of the cost. The promoters have agreed that some postponement is inevitable, and it is hoped that Parliament will agree to carrying the Bill over to another Session.

Damaged Supports of Waterloo Bridge

Mr. Mills asked the Minister of Transport if his attention had been called to the fact that the temporary wooden supports to the damaged arches of Waterloo Bridge were infected by death-watch beetles; and whether any inspection had been made of these supports since 1923.

Mr. Pybus said that the bridge and its supports were subject to constant inspection by the engineering staff of the L.C.C., and he was assured that Mr. Mills was misinformed.

Control of Rents

Mr. John Palin asked whether any and, if so, what proposals were under consideration to extend the control of rents and to effect a decrease in rents.

Mr. Perry asked whether, in view of the increasing prices of food and other commodities since September 21 and also the increased taxation falling heavily upon persons who had purchased their houses on the instalment or mortgage plan, it was the intention of the Government to introduce a new Rent and Mortgage Interest Restriction Bill.

Mr. E. D. Simon said that the action which the Government proposed was to extend the Rent Restriction Acts by means of the Expiring Laws Continuance Act.

Investigation of Basement Dwellings

Mr. Day asked the Minister of Health what investigations had been made into the number and description of occupants of basement dwellings in different parts of London; and would he make a statement of any such investigations and the conclusions and recommendations arrived at.

Mr. E. D. Simon said that the report of the County Medical Officer of the London County Council for the year 1929, and the report of the School Medical Officer of the Council for the year 1930, contained accounts of the investigations which had been carried out. The question of what further steps, if any, could usefully be taken to deal with unhealthy basements was engaging the active consideration of the London County Council and the Standing Joint Committee of the Metropolitan Borough Councils.

Housing Progress in Manchester

Sir Gerald Hurst asked how many subsidized houses were built in Manchester between May, 1929, and August, 1931, inclusive, and at what cost to the State.

Mr. E. D. Simon said that 5,807 subsidized houses were built in Manchester between the months named. The present value of the subsidies payable out of the Exchequer in respect of these houses was £472,390.

SOCIETIES AND INSTITUTIONS

"MODERN Tendencies in Decoration" was the title of a paper read by Mrs. Grace Lovat Fraser, F.I.B.D., at a meeting of the Incorporated Institute of British Decorators, held at Newcastle. Mr. Gloag's paper, printed in our last issue, was read at the same meeting. Mrs. Fraser analysed the problems of the modern home-maker and made a particular point of the considerable variety of jobs the modern house or flat had to perform.

Modern rooms, Mrs. Fraser said, had to accommodate quite different habits from those which the spacious, staid rooms of the nineteenth century were expected to accommodate. They had to be capable of making quick changes. They had to house gramophones and wireless sets, and at any moment preparations for a party might be thrust upon them, with a consequent demand for dancing space. Furniture had, under those demands, lost much of the solid air of permanence it once possessed. Things were lighter, simpler and fresher in colour. Plain walls to some extent compensated the eye for the restrictions of space. The modern, light, easy, informal method of furnishing had grown quite naturally out of real contemporary needs and tastes, as a style should grow.

On the subject of modernism, the lecturer pointed out that there were two kinds of modernism: the sort that broke with every tradition and was breathlessly revolutionary, and the sort that had links with the past. She divided the present modern movement in Europe into two main sections: the Latin section, represented mainly by France—as usual panting after the latest fashion—and the Nordic section, represented by Austria, Germany, Sweden and ourselves. The Nordic section was developing something in the true evolutionary sense; something that connected up easily and naturally with the best work of the early nineteenth century, and which bridged a gap in design instead of starting entirely afresh and forgetting every tradition, and incidentally every achievement, of previous periods. The furniture and interior decoration produced by the Nordic modernists could be comfortably associated with older work.

SOUTH WALES ARCHITECTS' VISIT

The South Wales Institute of Architects held their summer meeting on Saturday, September 25, when a visit was paid to London.

The party—comprising about twenty members and guests (including ladies)—on arrival in London, made a charabanc tour through the West End, Westminster and the City, to view some of the latest architectural work.

The party were then entertained to luncheon at the Architectural Association, by invitation of the Council. A speech of thanks was made, on behalf of the visitors, by Mr. J. Herbert Jones, F.R.I.B.A., President of the South Wales Institute of Architects, and replied to by Mr. C. H. James, F.R.I.B.A.

Later, the party proceeded to the Masonic Peace Memorial building in Great Queen Street, where they were met by the architects, Messrs. H. V. Ashley and Winton Newman, FF.R.I.B.A., and the Clerk of Works, Mr. Bennett, and conducted over the building. Great interest was shown by the members in the general planning of the building.

The following members of the South Wales Institute of Architects participated in the visit:

Messrs. J. Herbert Jones (President), C. S. Thomas and Ernest E. Morgan, of Swansea.

Messrs. T. Alwyn Lloyd, J. A. Hallam, Percy Thomas, C. J. Ward, J. W. Bishop, A. G. Robertson, J. R. J. Hallett, and Ivor P. Jones, of Cardiff.

Messrs. E. H. Fawckner and C. E. Compton, of Newport.

Mr. W. D. Thomas, of Porth, and Mr. W. T. Evans, of Haverfordwest.

VISIT TO ITALY

The Foreign Work Committee of Leplay House is arranging to take a group to Italy during the coming Christmas vacation.

Rome and Naples will be the centres from which Ostia, Tusculum, Herculaneum, Pompeii, Paestum and other places of interest from the archæological, historical and sociological points of view will be visited. Mr. W. M. Keesey, M.C., A.R.I.B.A., will direct the studies with the help of local specialists. Miss Margaret Tatton, F.R.G.S., will be hostess.

Full particulars are obtainable on application to Miss Tatton, Director, Foreign Work Committee, Leplay House, 65 Belgrave Road, Westminster, S.W.1.

LAW REPORTS

ALTERATIONS TO A SHOP

Balls Bros., Ltd., v. *Sinclair. Chancery Division. Before Mr. Justice Luxmoore*

THE issue in this action centred around the right of the defendant, Mr. L. D. Sinclair, a tailor, of 38a The Town, Enfield, to make certain alterations and additions to his shop.

The plaintiffs, a firm of wine and spirit merchants, with premises adjoining, and from whom the defendant held a lease of his shop for a term of twenty-one years from May, 1930, consisting of the ground and first floor, sought an injunction against the defendant to restrain him carrying out the alterations and additions, and further asked that defendant should be restrained from cutting, injuring or maiming the walls, in breach of a covenant in his lease.

Sir Gerald Hurst, K.C., for the plaintiffs, explained that the lease the defendant held contained covenants not to make any alterations or additions, except upon plans and specifications approved by the parties, or such as might have been authorized in writing by the landlord, and further he was not to cut, maim or injure the walls. It appeared, said counsel, that in January, 1931, the defendant's solicitor wrote the plaintiffs that the defendant, whether he received the plaintiffs' licence or not by a certain date, intended to carry out his project of turning the staircase round so as to face the shop door.

Counsel submitted that this was not an improvement, and the Landlord and Tenant Act, 1927, did not apply here. The covenant was not against improvement, but was against alterations and additions. Taking this view he submitted that the licence the defendant sought had not been unreasonably withheld.

Mr. Norman Daynes, K.C., for the defence, said his submission was that the licence had been unreasonably withheld, as in his view what the defendant desired to carry out was in the nature of an improvement. Under the circumstances, section 19 (subsection 2) of the Landlord and Tenant Act applied. In support of his contention, he cited a case decided by Mr. Justice Rowlatt.

His lordship, after hearing the evidence, said the case did not rest on the covenants of the lease alone, as Mr. Daynes had relied on subsection 2 of section 19 of the Act in question, which he had argued was applicable to all leases containing covenants which prevented improvements being made. In his lordship's view, the true construction of the subsection showed that it referred to covenants which would restrict the making of improvements. It might be that a covenant against alterations and additions would affect improvements, but he thought that if an alteration was made which effected an improvement, then that would be one of the matters which undoubtedly would come within the subsection.

In this case he had his opinion strengthened by a decision in the case of *Lilley and Skinner, Ltd.*, v. *Crump*, given by Mr. Justice Rowlatt, which decision was binding on his lordship. In his

opinion, he had to read into the covenant the provision that consent to an improvement or an addition must not be withheld unreasonably. He came to the conclusion that what was proposed to be done was an improvement within the Act. The defendant by his counsel had given an undertaking to reinstate the premises at the end of the term, and by this undertaking the landlord was amply protected. Being satisfied that the landlord's consent had been unreasonably withheld, his lordship dismissed the action with costs.

POSSESSION APPEAL ALLOWED

Green v. *Smith. King's Bench Divisional Court. Before Justices Swift and Charles*

A decision of the County Court judge at Westminster was reversed by the Court after hearing arguments in a case affecting the letting of rooms.

In the County Court, Miss Emily Green claimed possession of five rooms on the first and second floors at an address at Claverton Street, from William Thomas Smith, who was the tenant of the plaintiff. Miss Green sought possession on the ground of nuisance, but the judge found against her on the point and there was no appeal. The plaintiff, however, had an alternative claim for possession of two rooms on the second floor, as she alleged the defendant had sub-let them furnished, which brought them outside the protection of the Rent Restriction Act. The judge, however, decided against her.

Mr. Cairns, for the appellant, said the County Court judge found against his client, and she now appealed. The respondent had admitted the sub-letting, but put forward the contention that the sub-letting had not been continuous, and, further, that what sub-letting there had been was with the knowledge and consent of the plaintiff. Counsel's contention was that these two rooms were no longer protected, seeing that in December, 1927, the rooms were sub-let by the defendant to two ladies.

Mr. Sharp submitted that the occupants of the rooms were lodgers and not sub-tenants, and contended that as the plaintiff's main claim was for five rooms, she could not alter her claim to two rooms.

The Court allowed the appeal with costs, and sent the case back to the judge to decide when possession should be given.

Mr. Justice Swift, in the course of his judgment, said in his view of the law the Rent Restriction Act did not apply to protect the defendant, because he was not the tenant in occupation. He thought the Act only applied to a tenant in occupation, and could not be relied on by anyone who had sub-let to another person. Under these circumstances, he thought the County Court judge should have given judgment for possession. Here the defendant's counsel had submitted that, as plaintiff had claimed all five rooms let to the defendant, she could not now say, "I shall now claim two rooms." But the plaintiff had made her claim for the five rooms on the ground of nuisance, whilst as to the two rooms her claim was based on the contention that they were sub-let furnished. The defendant was out of possession of the rooms, and had sub-let them, and therefore the County Court judge should have entered judgment for possession.

Mr. Justice Charles agreed.

COMPETITIONS OPEN

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions, etc., obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, OCTOBER 7

C. F. ANNESLEY VOYSEY: EXHIBITION OF WORK. At the Batsford Gallery, North Audley Street, W.1. 10 a.m. to 6 p.m. (Saturdays, 10 a.m. to 1 p.m.). Until October 17. **10 a.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "A Comparative Analysis of Gothic and Renaissance Architecture." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, 35 Russell Square, W.C.1. Annual Exhibition. Until Saturday, October 10.

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow. Until October 24.

FRIDAY, OCTOBER 9

TOWN PLANNING INSTITUTE. Annual Country Meeting to be held at Bristol. Until October 11.

SATURDAY, OCTOBER 10

Sunrise, 6.14 a.m. Sunset, 5.22 p.m.

R.I.B.A., 9 Conduit Street, W.1. First of four non-technical lectures. "Architecture—What's the Use?" By Clough Williams-Ellis, F.R.I.B.A. Chairman: The Rt. Hon. Lord Riddell, HON. A.R.I.B.A. **3 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First of five non-technical lectures on Present-day Architecture: "The Building of a House." By Eric R. Jarrett, A.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 13

KING'S COLLEGE, Strand, W.C.2. First of nine public lectures on Gothic Art. "The Nature of Gothic." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, Southwark, S.E.1. "Thermal Storage for Central Heating." By E. M. Ackery, B.SC. **7 p.m.**

THURSDAY, OCTOBER 15

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. First of six lectures on "The History of English Architecture—XIIth Century." By Herbert Mansford. **7.30 p.m.**

FRIDAY, OCTOBER 16

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Council Meeting, 3 p.m. General Meeting; President's Address, 6.15 p.m. **3 p.m.**

SATURDAY, OCTOBER 17

Sunrise, 6.24 a.m. Sunset, 5.6 p.m.

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Manchester. "Modern Interior Decoration." By John M. Holmes.

R.I.B.A., 9 Conduit Street, W.1. Second of four non-technical lectures. "Some Opinions Upon Furniture and Decoration." By H. S. Goodhart-Rendel, F.R.I.B.A. Chairman: D. S. MacColl, M.A., HON. A.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. Annual Dinner, to be held in the Empire Rooms, Trocadero Restaurant, Piccadilly Circus, W.1.

KING'S COLLEGE, Strand, W.C.2. Second of nine public lectures on Gothic Art. "English Transitional and Early Gothic." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTE OF FUEL. At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. Presidential address by Sir Hugo Hirst, BT. **6 p.m.**

WEDNESDAY, OCTOBER 21

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Housing and town planning tour to Manchester and Liverpool. Departure to Manchester from Euston at 6.5 p.m. **6.5 p.m.**

INSTITUTE OF FUEL. Annual Dinner and Dance, to be held at the Connaught Rooms, Great Queen Street, W.C.2. Sir Hugo Hirst, BT., will preside. 6.45 for 7.15 p.m. **7.15 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Early Renaissance in Northern Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, OCTOBER 22

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Town Hall, Manchester. Lecture dealing with the activities of the Corporation with regard to housing, etc. 10 a.m. Luncheon (by invitation of the Corporation). 12.45 p.m. Tour of slum areas, housing estates and town-planning roads. 2 p.m. Reception in the City Art Gallery. 8 p.m. **10 a.m.**

FRIDAY, OCTOBER 23

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Municipal Buildings, Liverpool. Address by the Chairman of the Housing Committee on the work of the Liverpool Housing Committee. 10.30 a.m. Visit to Springwood Estate. 12 noon. Luncheon at Childwall. 1 p.m. Visit to housing estates. 2.30 p.m. **10.30 a.m.**

SATURDAY, OCTOBER 24

Sunrise, 6.37 a.m. Sunset, 4.51 p.m.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At Liverpool. Visit to slum-clearance areas. 10 a.m. Return to London at 2.5 p.m., arriving at Euston at 6 p.m. **10 a.m.**

R.I.B.A., 9 Conduit Street, W.1. Third of four non-technical lectures. "Tendencies in very Modern Buildings." A. S. G. Butler, F.R.I.B.A. Chairman: Sir Richard Paget, BT., HON. A.R.I.B.A. **3 p.m.**

RENAISSANCE ARCHITECTURE

Sir Banister Fletcher, PP.R.I.B.A., on Wednesday last, gave the first of twenty-four University extension lectures on "Renaissance Architecture," to be delivered every Wednesday throughout the session, at the Central School of Arts and Crafts, Southampton Row, W.C.1.

To put the subject in its right setting, Sir Banister gave a rapid, but stimulating review of ancient and mediæval architecture that led to the Renaissance style. Coming to the latter, he dealt with some of its influences. He graphically illustrated Renaissance buildings in Italy, France, Germany, Belgium, Spain and England, and said that he would endeavour to introduce the atmosphere of the Renaissance and show the connection between architecture and history from the fifteenth century to the present day—for the street architecture of today was still largely based on the Renaissance tradition.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Scottish Legal Building, 95 Bothwell Street, Glasgow (pages 458-462). Masonwork contractors : Thaw and Campbell, Ltd., who were also responsible for the dampcourses, Moler blocks, bricks, and stone. Measurers : Andrew Stewart, Pringle and Lockerbie. Masonwork foreman, Thomas Taylor. Sub-contractors : Gray's Ferro Concrete Co., Ltd., demolition; Val de Travers Asphalte Paving Co., Ltd., asphalt; Wm. Taylor and Son (Glasgow), Ltd., reinforced concrete; J. and G. Mossman, and Wm. Edwards and Son, Kemnay granite; Hadden Muir & Co., Inverawe granite; Redpath, Brown & Co., Ltd., structural steel; Kean and Wardrop, tiles; Warren and Stuart, consultant engineers for foundations; Maclean & Co., pavement lights; Considère Constructions, Ltd., consultant engineers for concrete floors, etc.; Roneo, Ltd., steel partitions; Pennycook Patent Glazing and Engineering Co., Ltd., patent glazing; Walter Macfarlane & Co., cast iron; Henry J. Stewart and Brothers, Karri wood flooring; North British Rubber Co., Ltd., rubber flooring; Wardrop and McGibbon, waterproofing materials; James Boyd and Sons, Ltd., central heating and ventilation; Barr & Co., vacuum cleaning; Wm. Kemp & Co., Ltd., grates; Alexander Ramsay, consultant engineer for electrical work; Osborne and Hunter, electric wiring, electric heating, bells and telephones; General Electric Co., electric light fixtures; Craigpark Electric Cable Co., electric cables; Galloway Gibb & Co., Ltd., sanitary fittings; Wm. McGeoch & Co., Ltd., bronze door furniture; Crittall Mfg. Co., Ltd., bronze casements and window furniture; H. H. Martyn & Co., Ltd., bronze folding gates, wrought-iron lift enclosures, bronze lift and wrought-iron railings and bronze handrails; Chas. T. Henshaw, bronze shopfronts and rising gates; Donald Clark and Son, Ltd., fireproof doors; George Rome & Co. (Glasgow), Ltd., plaster and decorative plaster; Birmingham Guild, Ltd., bronze entrance doors; Wylie and Lochhead, Ltd., joinery; Toffolo, Jackson & Co., terrazzo; Galbraith and Winton, marble; Kean and Wardrop, tiling; Cosmos Decorators, painting and wallpapers; Archd. Stewart & Co. (House and Ship Furnishers), Ltd., furniture; Archd. Dawson and Young, sculpture, modelling and carving; Roneo, Ltd., steel office fittings and steel cloakroom fittings; Waygood-Otis, Ltd., lifts; Dykes Bros., synchronised electric clocks.

Swan Court, Manor Street, Chelsea (pages 456, 464–468 and supplement). General contractors : F. G. Minter, Ltd. Joint consulting engineers, Lt.-Col. J. D. K. Restler and Major J. K. Allsop. Sub-contractors : London Brick Co. and Forders, Ltd., bricks; Ames and Finnis, roof tiling; Smith Walker, Ltd., constructional steel; Henry Hope and Sons, Ltd., metal casements, lantern lights, pavement lights and ironmongery; John Blaikie and Sons, Ltd., plumbing; H. Pontifex and Sons, Ltd., sanitary fittings; G. E. Taylor & Co., electricians; Lyne and Sons, terrazzo and granolithic; Blockleys, facing bricks; Ragusa Asphalte Co., Ltd., asphalt; Diespeker & Co., Ltd., patent floors; J. Jeffreys & Co., Ltd., heating and hot water; Berkeley Electrical Engineering Co., Ltd., and Ascog, Ltd., electrical fittings; Docker Bros., Induroleum floors and cellulose paint; Wm. Bloye, fibrous plaster and stone carver; Wotton and Sons, glazier; Arthur Foulds, Ltd., kitchen fittings; F. G. Minter (Decorations), Ltd., decorators; Naylor Bros., paint and distemper; P. W. Rutherford & Co., linoleum; Burley and Sons, Ltd., and Constable Hart & Co., Ltd., garden layout.

TRADE NOTES

There has recently been erected on the outskirts of Watford, overlooking the Colne Valley, a model factory for the Universal Asbestos Manufacturing Co., Ltd. The executive of the Company, who are responsible for the erection of the building, firmly believe that the architectural effect which can be obtained from the scientific use of asbestos-cement has not been fully explored by the building and allied trades. They have accordingly laid down a modern plant and have organized a service for the supply of the following products : Spanish tiles; pantiles, Watford "Handcraft" tiles, valley tiles, and tiled sheets. In the search for improved architectural effects, however, the value of asbestos-cement from the general utility standpoint has, it is stated, not been overlooked. Improved methods of manufacture and originality in design will, it is claimed, be apparent in products such as super-six sheets, standard 3-in. corrugated sheets, flat sheets, slates, diagonal and straight cover patterns, and ridges, aprons, barge boards, louvres, etc. The firm has adopted the trade name of "Handcraft."

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The British Steelwork Association announces that an order has been placed, on behalf of the Rt. Rev. the Abbot of Buckfast, for the steelwork for the nave of the new Buckfast Abbey Church at Buckfastleigh, Devon. The whole of the work at the abbey has been carried out by the monks themselves, who have been actively engaged on the erection of the structural steelwork. Messrs. John Booth and Sons of Bolton, who have received the order for the steelwork, have recently completed the installation of fireproof doors and an ornamental grille to safeguard the archives in the ancient cathedral of St. Magnus in the Orkney Islands, and have received instructions from H.M. Office of Works for the strengthening of the south-west corner of Goodrich Castle in Herefordshire, and also Monmouth Castle.

*

Some Products for Civil Engineers is the title of a booklet recently issued by Messrs. Thos. Butlin & Co., a branch of the United Steel Co., Ltd., of Wellingborough, Northants. The firm, which, it is stated, is concerned principally with the requirements of civil and municipal engineers, highway engineers and surveyors, has a modern well-equipped iron foundry, with pattern and machine shops attached, a coating plant, a works for the manufacture of concrete products, and a tarmacadam plant. The principal output of the iron foundry comprises heavy iron castings, such as tunnel and shaft segments, segments for well linings, gulley grates, manhole and inspection covers and similar products. General castings for the engineer and contractor are also undertaken. Where required, the pattern making and the machining of castings are also done. In the precast concrete works are made paving slabs, road kerbs of all sections, fencing posts, steps, etc., with or without reinforcement. Tarmacadam in all sizes is produced by the tar spray process, which, it is claimed, ensures thorough coating and uniformity of quality. The booklet gives, in further detail, the principal ranges of products.

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Mr. A. K. Kirsop, of 4 Nuns Lane, Newcastle-on-Tyne, has been appointed the representative of Messrs. Helliwell & Co., Ltd., for the Newcastle district.

ANNOUNCEMENTS

Mr. Edward Maufe, M.A., F.R.I.B.A., has removed his offices from 3 Raymond Buildings, Gray's Inn, W.C.1, to 4 Pickering Place, St. James's Street, S.W.1. Telephone : Whitehall 5730.

Mr. H. R. Hurle Bath has removed his office to 1 Clarence House, 204A High Holborn, W.C.1. Telephone Number : Holborn 2879.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The CROYDON Corporation has approved plans by Mr. J. M. Sheppard for the erection of a medical officer's house at the Warlingham Mental Hospital.

The General Aircraft, Ltd., has submitted plans to the CROYDON Corporation for the construction of an aerodrome and buildings at Addington.

The CROYDON Education Committee has obtained a site in Featherbed Lane, Addington, for the erection of an open-air school.

Plans passed by the CROYDON Corporation: Seventeen houses, Waddon Court, and sixteen houses, Birchamber Road, for Mr. F. H. Willcocks; twelve houses, Davidson Road, for Mr. R. Barrs; fifty-two garages, Shirley Way, for Messrs. J. Crock and Sons, Ltd.; warehouse, Church Road, for Messrs. Grace and Marsh, Ltd.; parish hall, Kingsley Road, for Mr. T. E. W. Grant; workshop, Bedford Park, for Messrs. E. H. Smith (Croydon), Ltd.; alterations and additions, 43-5 High Street, for Messrs. Gordon and Gordon; reconstruction, "Duke of Cambridge" public-house, Holmesdale Road, for Messrs. Page and Overton; six houses, Davidson Road, for Mr. F. Fowles; printing works extensions, 104 High Street, for Messrs. Rees and Partners; shops, Lower Addiscombe Road, for Messrs. Bethel and Swannell; factory extension, Purley Way, for Messrs. Bryce, Ltd.; 136 houses, Waddon estate, for Corporation Housing Committee; five houses, Ash Road, for Messrs. T. Markwick & Co.; three bungalows, The Glade, for Messrs. Wylie and Berlyn; eight houses, Croydon Road, and six houses, The Ridgway, for Mr. H. Macintosh; showroom, 76-8 North End, for Mr. E. Bates; alterations and additions, Norwood Cottage Hospital, Hermitage Road, for Messrs. Marsh and Sons; development of the Hayling Park estate, for Mr. J. G. Cooper; alterations and additions, "Sir Robert Peel" public-house, Tamworth Road, for Mr. F. M. Kirby; forty-one garages, Bert Road, for Messrs. Wallis & Co.; four houses and four flats, Grange Road, for Messrs. Smith & Co.; sixteen houses, Cypress Road, for Mr. J. Maclaren Ross.

The EAST HAM Corporation is seeking sanction from the Ministry of Health to proceed immediately with the erection of a nursery block at the Aldersbrook Homes, from plans prepared by Mr. G. A. Allan. The estimated cost is £21,000.

Plans passed by the EAST HAM Corporation: Factory, Shaftesbury Road, for Mr. H. W. Binns; house, Aldersbrook Road, for Messrs. Clemens Bros., Ltd.; eight shops and showroom, Central Parade, for Messrs. Lee, Dickins and Co.; alterations, 699 Romford Road, for Mr. W. Evans.

The Office of Works is to erect county court offices at the corner of High Road and Buckingham Road, ILFORD.

Messrs. Hobbs Bros. are to develop the Mosford Green estate, ILFORD.

Plans passed by the ILFORD Corporation: Eight houses, Henley Road, for Messrs. E. Glenny and Son; three houses, Sunnymede Drive, and fifteen shops, Redbridge Lane, for Mr. T. Anders; nine shops, Eastern Avenue, for Mr. J. A. Dartnall; two houses, Mayesford Road, for Messrs. P. G. Ashton and Sons; four houses, Beechwood Gardens, for Mr. A. Smith; three shops, Tanners Lane, for Mr. J. Aldridge; twenty houses, South Park Terrace, for Messrs. Holland Bros.; additions, St. Luke's Club hall, Baxter Road, for Mr. J. K. Nelson; new market, Ilford Lane, for Mr. G. F. Siegerts; dairy, Ilford Lane, for Mr. R. G. Turner-Gordon; additions, lecture hall, Congregational Church, High Road, for Mr. F. G. Faunch; seventy-four houses, Cedar Park Gardens, for Mr. F. Smith; five houses, Forest Road, for Messrs. Haines and Warwick, Ltd.; four shops, Chadwell Heath Lane, for Messrs. P. G. Ashton and Sons; reconstruction, 104 High Road, for Messrs. D. J. Moss and Partner; ten houses, Redbridge Lane, for Mr. T. Anders; additions, 245 High Road, for Messrs. Cuthbert, Lake and Sutton; four houses, The Drive, for Mr. A. P. Griggs; ten houses, Northwood Gardens, for Mr. A. Smith; additions, Seven Kings Baptist Church, Cameron Road, for Messrs. Robinson Bros.; four houses, Horns Road, for Messrs. C. & R. Martin; three houses, Birkbeck Road, for Mr. J. Aldridge; twelve houses, Reform Place, for Mr. W. L. Thompson; fourteen houses, Crownfield Avenue, for Mr. J. W. Lohden; ten houses, Avondale Crescent, for Mr. W. M. Edwards; four houses, Southwood Gardens, for Mr. T. Anders; four houses, Glendale Avenue, for Mr. W. Crampin; eight houses, Embassy Gardens, for Messrs. V. & F. Jenner; seventeen houses, Bell Royal Gardens, for Mr. F. S. Russell; alterations, United Methodist Sunday School, Ilford Lane, for Messrs. Dixon Hill & Co.; two shops, Eastern Avenue, for the Seymour Construction Co.; forty-nine houses, Roxy Avenue, for Messrs. P. Triplete, Ltd.; alterations, operating block, King George Hospital, for Messrs. C. J. Dawson, Son and Allardyce.

Plans passed by the LEWISHAM B.C.: Houses in Fossil Road, Vicars Hill and Cliffview Road, for Mr. A. McDougall; twenty-two houses, Tewkesbury Lodge estate, Westwood Park, for Mr. Hugh Macintosh; houses and flats, High Street and Round Hill, Sydenham, for Mr. W. J. C. Kane; buildings, corner of High Road and Old Road, Lee, for Mr. J. P. Briggs.

The POPLAR B.C. has obtained a grant for the erection of baths in East India Dock Road.

The SUTTON Trustees are to take possession of land in Greasley Road, Abbey Hulton, required for the erection of houses.

SOUTHERN COUNTIES

The BEXHILL Corporation is purchasing land on the Broad Oak Farm estate for housing and other purposes.

Plans passed by the BEXHILL Corporation: Five houses, Leasington Gardens, for Messrs. Tubbs and Messer; eleven houses, St. George's Road, for Mr. H. H. Ford; two houses, Barnhorn Road, for Mr. J. E. Maynard; four houses, Broad Oak Lane, for Mr. G. P. Bishop; two houses, St. James Avenue, for Mr. A. Radcliffe; six houses, Turkey Road, etc., for Mr. E. Bunce; shop and house, Ninfield Road, for Mr. J. Hicks; two houses, Sedgwick Road, for Mr. J. H. Lye; house, Peartree Lane, for Mr. D. J. Williams.

Plans passed by the GRAVESEND Corporation: Fitting shop, Singlewell Road, for Mr. Martin; eighteen houses, Ascot Road, for Messrs. Dagnall Bros.; house, Dennis Road, for Mr. Linggood; two houses, Ridgeway Avenue, for Messrs. W. E. & H. E. Thomas, Ltd.; Congregational Sunday School, Ridgeway Avenue, for Mr. T. Bennett.

Plans passed by the NEWBURY Corporation: Two houses, King's Road, for Mr. T. C. Pembroke; alterations and additions, 34 Northbrook Street, for Messrs. Blacket, Turner & Co., Ltd.; alterations and additions, "Rokeby Arms" public-house, and "Lamb" public-house, for the South Berks Brewery Co., Ltd.; alterations and additions, 16 Northbrook Street, for Messrs. Montague Burton, Ltd.; alterations and additions, 13-4 Northbrook Street, for Messrs. F. W. Woolworth & Co.; nurses' hostel, Poor Law institution, for Institution Committee; house, Monks Lane, for Mr. E. B. Hitchman.

The OXFORD Corporation is seeking sanction to borrow £27,687 for extensions at the municipal offices.

EASTERN COUNTIES

Mr. J. M. Sheppard has prepared plans for alterations and improvements at the Haymeans institution, BISHOP'S STORTFORD, for the Herts C.C., at an estimated cost of £36,000.

The Catholic authorities are to erect a school for 250 children at the rear of St. Phillip's Priory, London Road, CHELMSFORD.

Plans passed by the CHELMSFORD Corporation: Twenty-one houses, off Wood Street, for Mr. W. J. Wade; two houses, Lodge Farm, Galleywood, for Mr. R. H. Currie; four houses, Moulsham Drive, for Mr. W. Campen; house, Linmouth Avenue, for Mr. H. R. Tapp; block of shops and flats, Moulsham Street and Friars Place, for Mr. E. Ryder; eight houses, St. John's Road, for Mr. A. J. Gozzett; twelve houses, Galleywood Road, for Mr. R. H. Currie; twelve houses, Galleywood Road, for Mr. G. E. Sutton.

The Herts C.C. has appointed Mr. W. H. Hobday as architect for extensions and improvements at the Hempstead House institution, HEMEL HEMPSTEAD.

The Herts C.C. has appointed Messrs. Alfred Saxon Snell and Phillips as architects for a scheme for extensions at the Oster House institution, ST. ALBANS.

MIDLAND COUNTIES

It is proposed to erect 830 houses in Longton Road, BUCKNALL, Staffs., from the designs of Mr. Jervis Mathew.

The COVENTRY Corporation is to clear and reconstruct the Much Park Street and St. John Street areas.

The Midland Counties Mutual Benefit Approved Society has purchased a site in Priory Road, DUDLEY, for the erection of offices.

Plans passed by the DUDLEY Corporation: Retail shops, offices, etc., Wolverhampton Street, for Davenports C.B. and Brewery, Ltd.; extensions, "Old Struggling Man" public-house, Eve Hill, for Wolverhampton and Dudley Breweries, Ltd.; alterations, "Woolpack" Inn, Castle Street, for Messrs. J. Hanson and Sons, Ltd.; infants' school, Swan Street, Netherton, for the Education Committee; dairy, Bumblehole Road, for Mr. E. Alderson; additions, nurses' home, Guest Hospital, Tipton Road, for the governors; two houses, St. James Road, for Mr. W. Whittingham; mission church, Priory estate, for Mr. H. Watson; Church House, Worcester; house, Quarry Road, for Mr. S. V. Bradney.

The Sherwood Colliery Co. is to erect pithead baths, swimming baths and a canteen at Sherwood Colliery, MANSFIELD.

NORTHERN COUNTIES

Plans passed by the MORECAMBE Corporation: Alterations, Wellington Hotel, Marine Road, for Mr. J. Rigby; estate development, Knowlys Avenue, for Strawberry Gardens (Heysham), Ltd.; two houses, Bare Lane, for Mr. H. Priestley; engineering works, Westgate, for Mr. R. H. Kay; fifty-six houses, Brentlia Crescent, for Mr. J. H. Atkinson; estate development, Homfray Avenue, for Mr. A. Heathcote; house, Longlands Crescent, for Mr. H. Wood; two houses, Twemlow Parade, for Messrs. Swithenbank and Ladell; two houses, Margaret Street, for Messrs. D. Hunt and Son; four houses, Morecambe Road, for Mr. R. Bigland; two houses, Burlington Avenue, for Messrs. Edmondson Bros.; house, Westgate, for Mr. A. Clough; ten bungalows, Hawksworth Crescent, for Mr. F. Obank.

The TYNEMOUTH Corporation has purchased a site of 135 acres of land at Howden Road, for housing purposes.

SCOTLAND

Plans passed by the GLASGOW Corporation: Office, dwelling-houses, etc., King Street, Pollokshaws, for Mr. Alexander M'Lellan; temporary shops, Boydstone Road, Carnwadric, for Pollokshaws Co-op. Society, Ltd.; store, Carntyne Road, for Parazone Co., Ltd.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A2	Atherstone	Mid. Counties	1 5	1 0½
B2	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0½
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A2	Bewdley ..	Mid. Counties	1 5½	1 1½
B2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0½
A2	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B1	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B2	Brixham ..	S.W. Counties	1 3	11½
A2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A2	Crewe ..	N.W. Counties	1 5½	1 1½
A2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11½
A2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11½
A2	Driffield ..	Yorkshire	1 5	1 0½
A2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	*1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0½
A2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1½
A	Goole ..	Yorkshire	1 5½	1 1½
A2	Gosport ..	S. Counties	1 5	1 0½
A2	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11½
A2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0½
B2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1½
A2	Kidderminster	Mid. Counties	1 5½	1 1½
B2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11½
A2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1½
B2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth	S. Wales & M.	1 3½	11½
	& S. and E. Glamorganshire			
A	Morecambe	N.W. Counties	1 6½	1 2
A2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0½
A2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1½
A2	Skipton ..	Yorkshire	1 5½	1 1½
A2	Slough ..	S. Counties	1 5	1 0½
A2	Solihull ..	Mid. Counties	1 5½	1 1½
A2	South'pton	S. Counties	1 5	1 0½
A2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1½
A2	Wellingborough	Mid. Counties	1 5½	1 1½
A2	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1½
A2	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 9
¾" Crushed Ballast . . . . . ,,	10 0
Building Sand . . . . . ,,	10 6
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bend . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R at Nine Elms:	s. d.
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . ,,	2 11
York stone . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . P.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . lb.	4
,, copper . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, 2/8" . . . Sq.	1 1 0
,, 3/8" . . . ,,	1 3 6
,, 1" . . . ,,	1 5 6
,, 1¼" . . . ,,	1 11 0
,, 1½" . . . ,,	1 15 0
Deal matchings, 2/8" . . . ,,	16 0
,, 3/8" . . . ,,	17 6
,, 1" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅛"	¼"	⅜"	½"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch . .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder . .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1 0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1 6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1 0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1 1	1/10	
Pieces, 12"–23⅞" long, each	10	1/1	1/11	2 8	4 9	
,, 3"–11⅞" long ,,	7	9	1/3	1/8	3/–	
Long screws, 12"–23⅞" long,,	11	1/3	2/2	2/10	5 3	
,, ,, 3"–11⅞" long ,,	8	10	1/5	1/11	3/6	
Bends . . . ,,	8	11	1/7½	2/7½	5 2	
Springs not socketed ,,	5	7	1/1½	1/11½	3/11	
Socket unions . ,,	2/–	3/–	5/6	6/9	10 –	
Elbows, square . ,,	10	1/1	1/6	2/2	4/3	
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1	
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6	
Plain sockets and nipples ,,	3	4	6	8	1/3	
Diminished sockets ,,	4	6	9	1/–	2/–	
Flanges . . ,,	9	1/–	1/4	1/9	2/9	
Caps . . . ,,	3½	5	8	1/–	2/–	
Backnuts . . ,,	2	3	5	6	1/1	
Iron main cocks ,,	1/6	2/3	4/2	5/4	11/6	
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–	

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 0
,, ,, ⅞" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

Cast-iron rain-water pipes of	3" s. d.	4" s. d.
ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets. . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	20 0
,, drawn pipes . . . ,,	20 6
,, soil pipe . . . ,,	23 6
,, scrap . . . ,,	19 0
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2
Coated . . ,,	1 1	1 3	2
Galvanized . ,,	2 0	2 6	4
Holderbats . . each	3 10	4 0	4
Bends . . . ,,	3 9	5 3	10
Shoes . . . ,,	2 10	4 4	9
Heads . . . ,,	4 8	8 5	12

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 6
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 16 0
Sirapite . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . Y.C.	11 6
Hair . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . . ,,	1 0	to 1 3
,, ,, 2 . . ,,	1 2	,, 1 7
,, ,, 3 . . ,,	1 7	,, 2 5
,, ,, 4 . . ,,	2 1	,, 2 11
,, ,, 6 . . ,,	2 3	,, 3 2
,, ,, 8 . . ,,	2 6	,, 3 6
,, ,, 12 . . ,,	2 9	,, 3 8
,, ,, 20 . . ,,	3 0	,, 3 11
,, ,, 45 . . ,,	3 3	,, 4 1
,, ,, 65 . . ,,	3 7	,, 4 6
,, ,, 90 . . ,,	3 10	,, 4 0
,, ,, 100 . . ,,	4 0	,, 5 0
Vita glass, sheet, n/e 1 . . ,,		1 0
,, ,, ,, 2 . . ,,		1 3
,, ,, ,, over 2 . . ,,		1 9
,, ,, plate, n/e 1 . . ,,		1 0
,, ,, ,, 2 . . ,,		3 0
,, ,, ,, 5 . . ,,		4 0
,, ,, ,, 7 . . ,,		5 0
,, ,, ,, 15 . . ,,		6 0
,, ,, ,, over 15 . . ,,		7
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n e 5′ 0″ deep and cart away . . Y.C.	10 0
,, to form basement n e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . ,,	1 18 6
,, ,, ,, underpinning . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing . . .	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
¾″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do., all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
⅛″ deal sawn boarding and fixing to joists . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1¼″ ,, ,, ,, ,, ... ,,	2 7 6
1″ × 2″ fir battening for Countess slating . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
½″ do. . . . . ,,	3 4 0
¾″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1¼″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns . . . . . Each	9
1⅛″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1⅛″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . ,,	3 0
1¼″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . ,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.										
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 16 6										
Do. in flashings . . . . . ,,	1 19 0										
Do. in covering to turrets, etc. . . . . ,,	2 6 0										
Do. in soakers . . . . . ,,	1 12 0										
Labour to welted edge . . . . . F.R.	3½										
Open copper nailing . . . . . ,,	3½										
Close ,, ... ,,	4½										
	½″		¾″		1″		1¼″		2″		4″
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s. d.
Lead service pipe and fixing with pipe hooks . . F.R.	1	2	1	7	2	1	2	8	3	8	—
Do. soil pipe and fixing with cast lead tacks . .	—		—		—		—		—		5 9
Extra, only to bends Each	—		—		—		—		2	3	6 6
Do. to stop ends . ,,	7		9		1	0	1	3	2	0	—
Boiler screws and unions . . . ,,	3	6	4	0	5	6	8	0	—		—
Lead traps . . ,,	—		—		—		7	6	10	6	—
Screw down bib valves . . ,,	7	6	10	6	12	6	—		—		—
Do. stop cocks . ,,	10	0	12	0	16	0	23	6	56	6	—
4″ cast-iron ½-rd. gutter and fixing . . . . F.R.											1 3
Extra, only stop ends . . . . . Each											1 0
Do. angles . . . . . ,,											1 6
Do. outlets . . . . . ,,											3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.											1 6
Extra, only for shoes . . . . . Each											2 6
Do. for plain heads . . . . . ,,											5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement . ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, ,, ... ,,	1 7 0
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

SWAN COURT, CHELSEA, S.W.

DETAIL DRAWINGS OF ARCHWAYS AND MAIN ENTRANCES

[*Buckland and Haywood, Architects.*

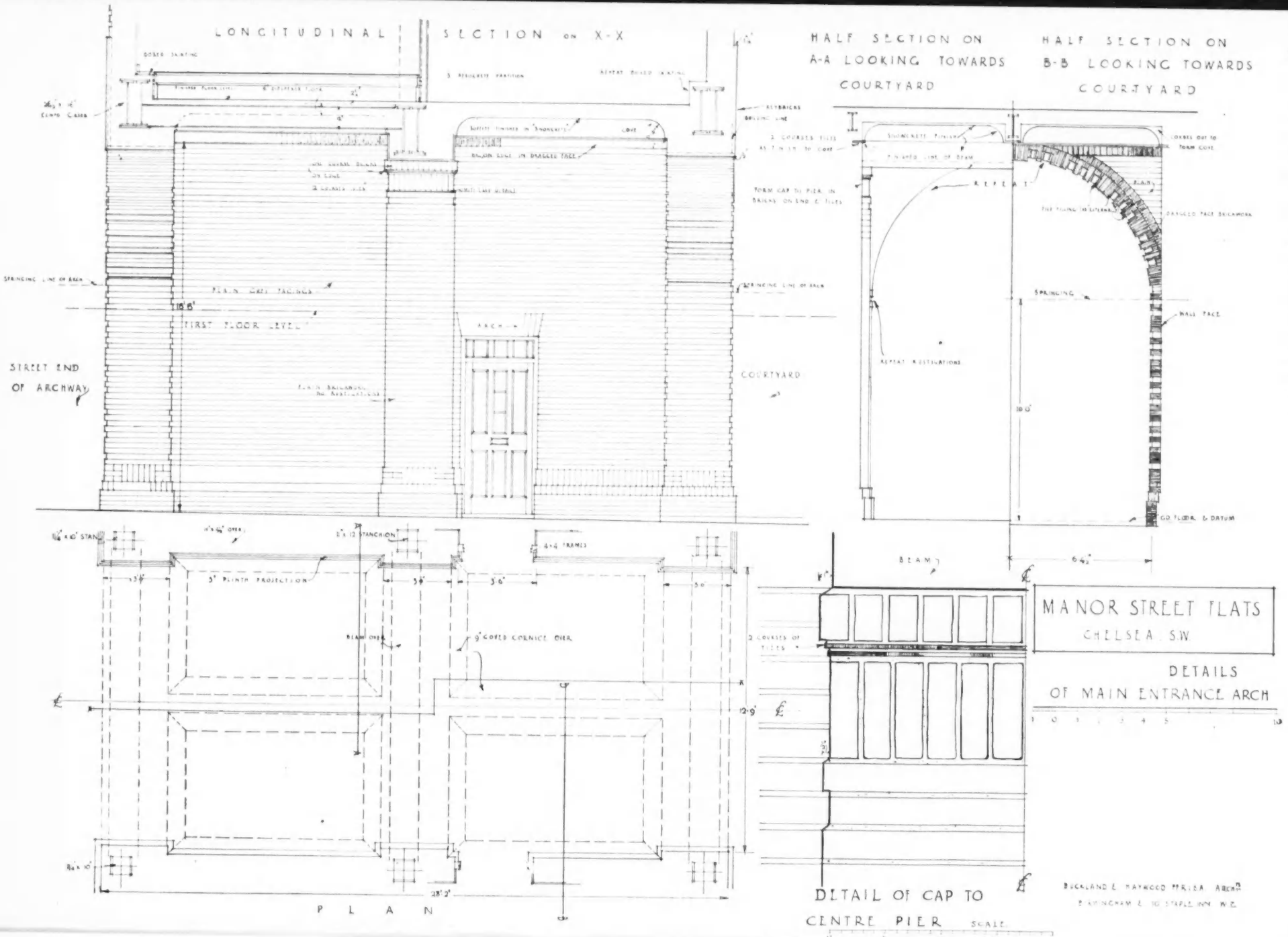
LOOKING THROUGH AN ARCHWAY INTO THE ENTRANCE COURTYARD

SWAN COURT, a block of flats, maisonnettes and studio flats in Chelsea, is planned as a quadrangle about a central courtyard, and is bounded on one side by Manor Street, and on the other by Flood Street, two thoroughfares running parallel to each other into the King's Road.

The courtyard, a glimpse of which is shown in the photograph reproduced above, is approached from either street through a forecourt and an archway, and contains the two main entrances and lifts to the flats and studio flats.

The architect's detail drawings of these archways and main entrances are reproduced on the following pages. The maisonnettes are entered from the forecourts and are situated on the ground and first floors of the building.

Further illustrations of Swan Court appear elsewhere in this issue.



MANOR STREET FLATS

CHELSEA. S.W.

DETAILS OF MAIN ENTRANCE ARCH

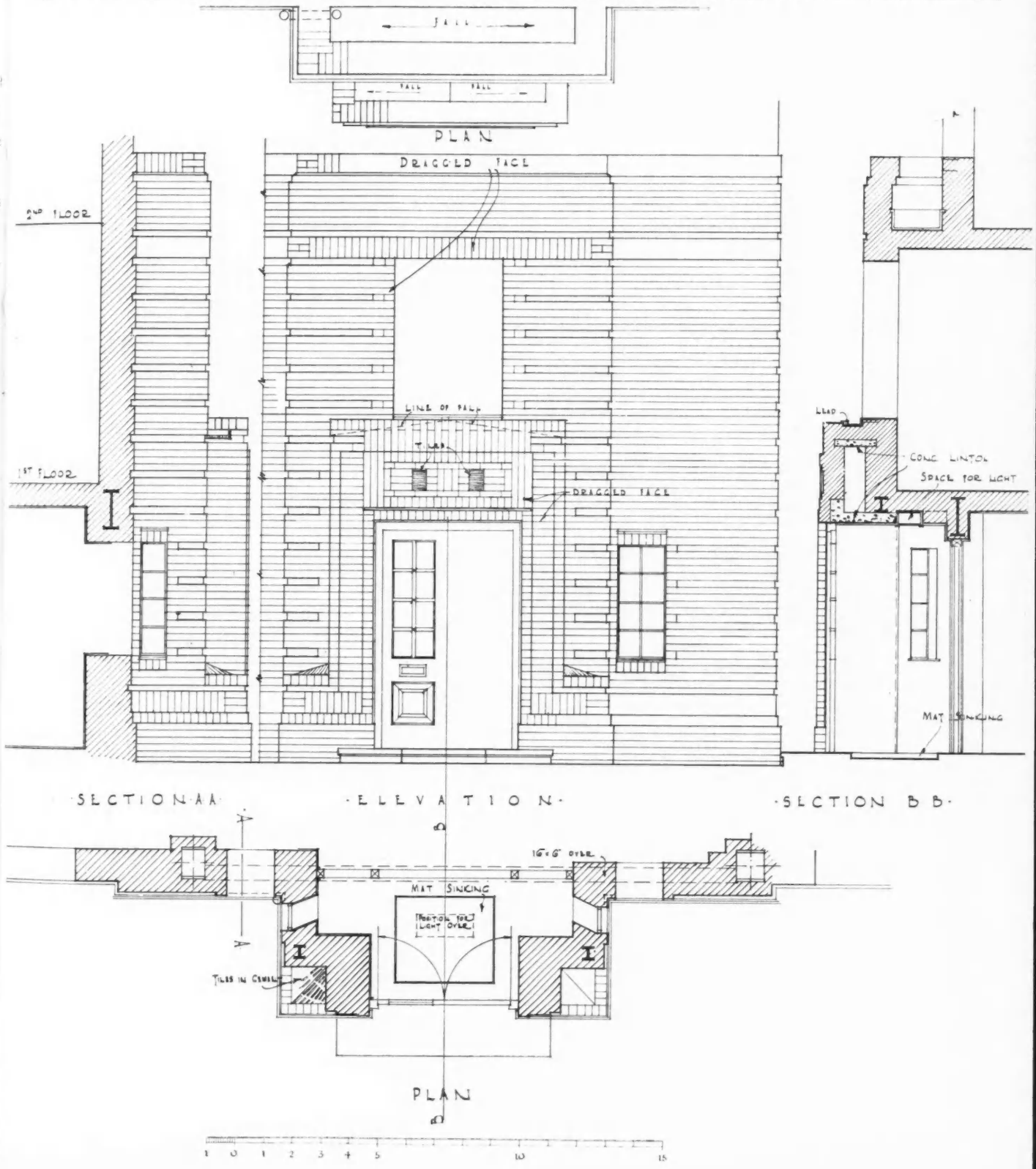
1 0 1 2 3 4 5 10

BUCKLAND & HAYWOOD F.R.I.B.A. ARCHTS
BARKINGHAM & TO STAPLE INN W.C.

MANOR · STREET · FLATS · CHELSEA

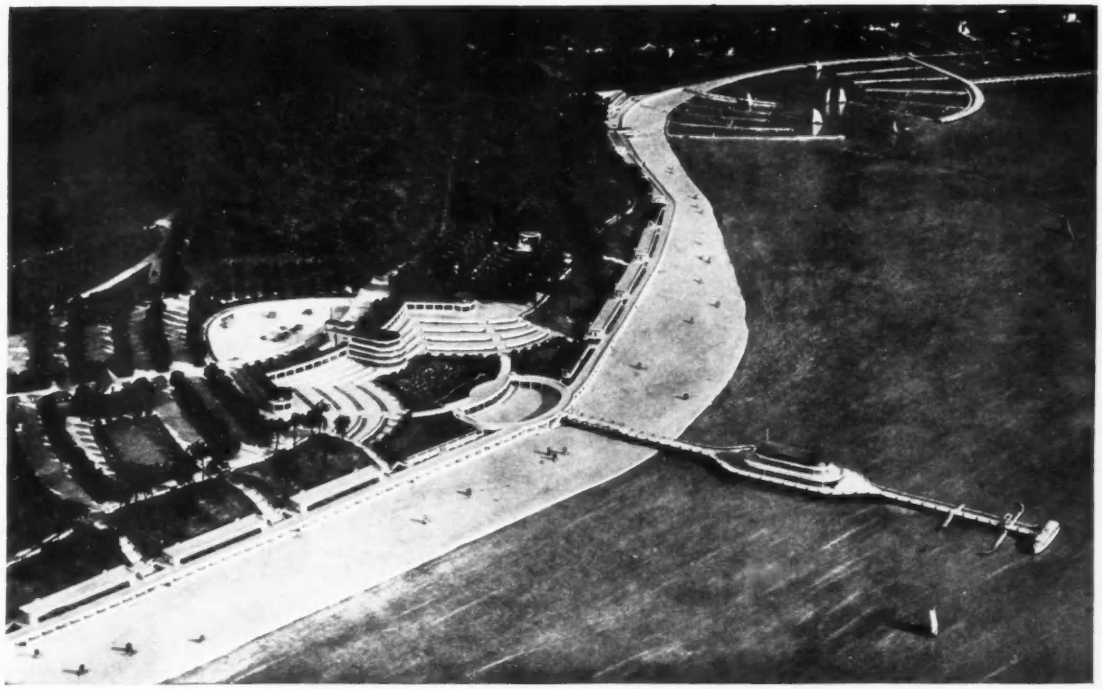
· DETAIL OF BRICKWORK TO MAIN ENTRANCE PORCH ·

BUCKLAND & HAYWOOD F.R.I.B.A. ARCHITECTS.



BATHING BEACH AT WANNSEE, BERLIN

PHOTOGRAPHS AND DRAWINGS ILLUSTRATING THE COMPLETED SCHEME



[*Martin Wagner and Richard Ermisch, Architects.*

THE MODEL FOR THE COMPLETED PROJECT, SHOWING THE BEACH AND BUILDINGS

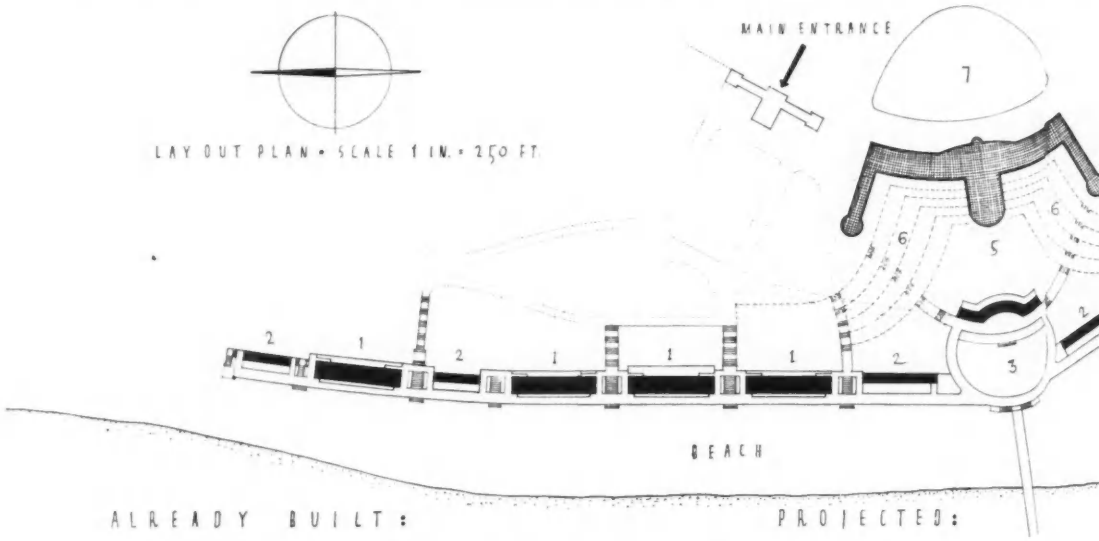
WANNSEE, the lake-side site of the municipal project here outlined in photographs and drawings, is part of the Grunewald in the Dauerwald district, and is reached in about half an hour from the centre of Berlin by electric tram to Potsdam. It is situated among woods and fields which lie high above the water and fall down to the beach in a steep slope towards the south-west. The beach is some 60 yards broad, and, when completed, the bathing station will extend for about 1,300 yards.

The buildings are erected at the bottom of the slope, so that the view from above over the very beautiful water scenery is not obstructed, and they will fit in well with the landscape when seen from the water. In a hollow, approximately in the middle of the scheme, a large main restaurant is to be erected. This will be the centre of interest of the layout.

At present only the north wing of the scheme has been carried out. This comprises a row of buildings which consist of the essential changing-rooms (of several types) and lavatories. They are connected by a wide covered way and several random flights of steps.

This week's leading article debates the expediency of proceeding with such enterprises in relation to the current situation. A future supplement will be devoted to other details of the scheme.

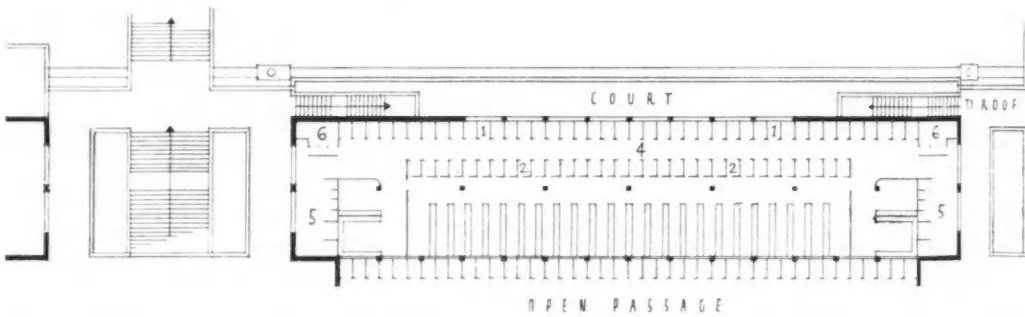
BATHING STATION AT WANNSEE NEAR BERLIN • DESIGNED



LAY OUT PLAN • SCALE 1 IN. • 250 FT.

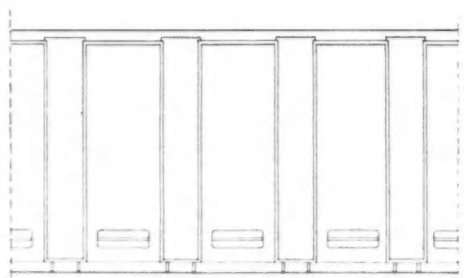
ALREADY BUILT: PROJECTED:

1 • DRESSING BOXES 2 • LAVATORIES 3 • RESTAURANT 4 • WARDROBE 5 • MAIN

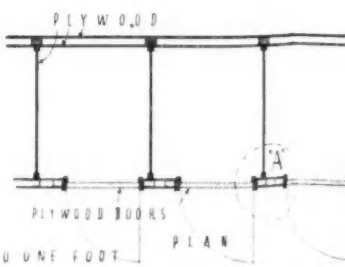


THE FIRST FLOOR OF ONE OF THE DRESSING PAVILIONS
SCALE 1/32" TO ONE FOOT

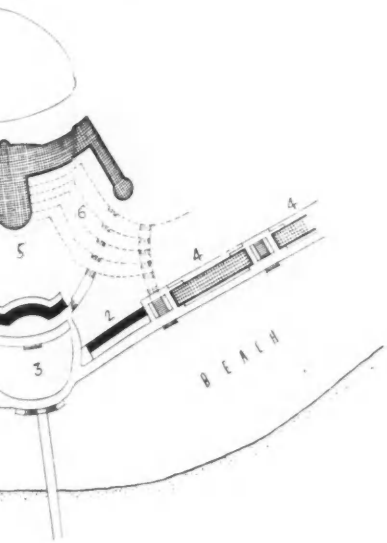
1 • SINGLE CUBICLES 2 • CHANGING CUBICLES 3 • CLOAKROOM FOR CUBICLES 4 • PASSAGE SLEVAT



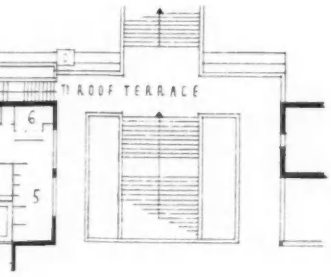
PART ELEVATION OF SINGLE CUBICLES
SCALE • ¼ INCH TO ONE FOOT



ESIGNED BY HERREN M·WAGNER AND R· ERMISCH · BERLIN

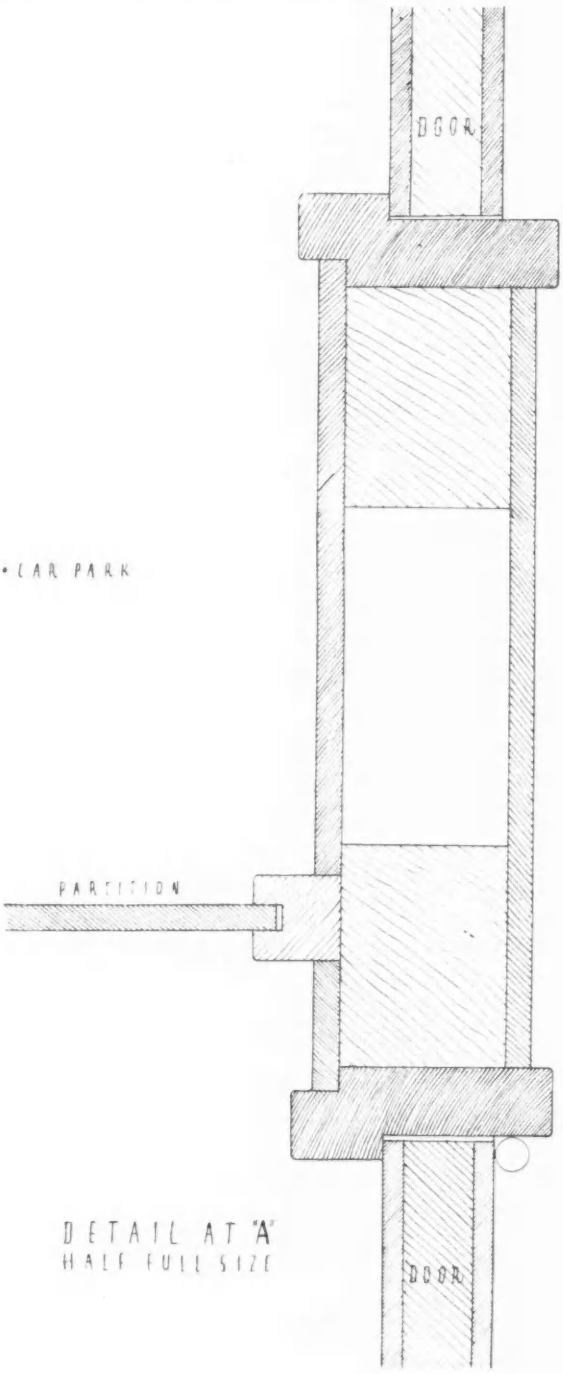


5·MAIN RESTAURANT 6·TERRACES 7·CAR PARK



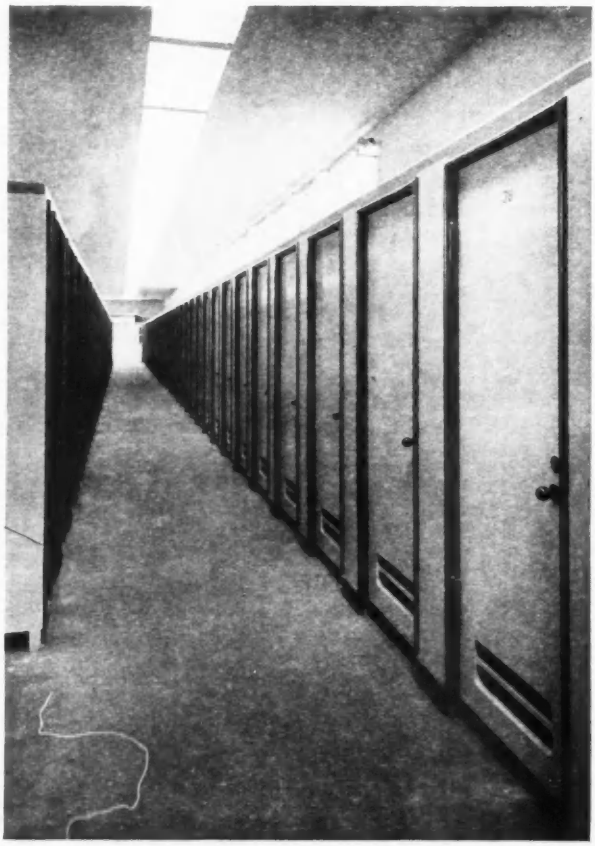
VILIONS

GAGE SLAVATORY 6· CASHIER



DETAIL AT "A"
HALF FULL SIZE

THE BEACH FROM THE WATER, SHOWING THREE OF THE DRESSING PAVILIONS

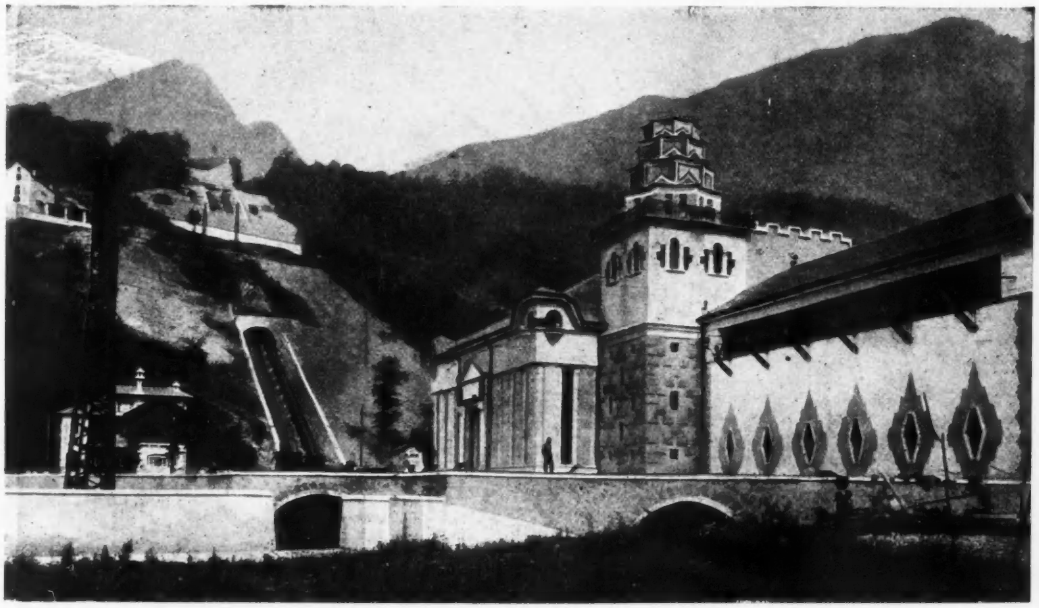


[*Martin Wagner and Richard Ermisch, Architects.*

A DRESSING PAVILION WITH SINGLE CABINS

SELECTED PRECEDENTS:

INSIDE AND OUTSIDE THE POWER-HOUSE ABROAD



1. *HYDRO-ELECTRIC POWER STATION, CREVOLA, ITALY.*

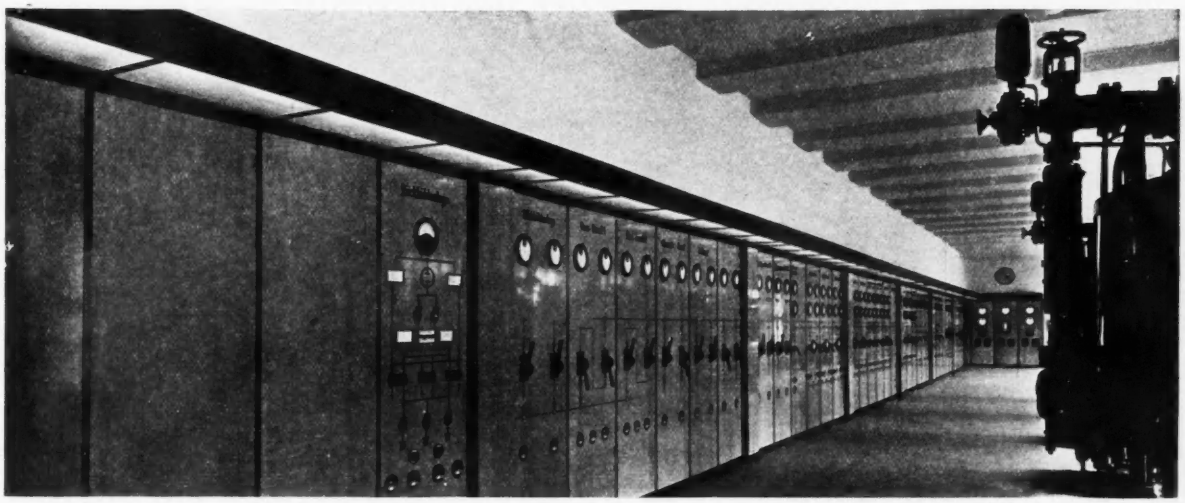
NO type of building stands in greater need of that "tidying up" which is part of the architect's civic mission in a wilfully untidy world than the electric power station. It is to be hoped that the accompanying illustrations may help to dispel a still prevalent illusion that there are high technical reasons why it should be a higgledy-piggledy affair of broken levels and unco-ordinated parts externally, and a medley of disorderly piping and chaotically-arranged switches and meters within.

Figure **2**, *the switchboard of a city substation serving an underground railway, shows what can be done by calling in the architect. The way in which the dial faces of the various indicators and gauges have been arranged in symmetrical patterns is a sight for sore eyes. Further comment is superfluous.*

The remaining figures illustrate the exteriors of different types of electrical stations. Figure **1** *represents the hydro-electric generating station at Crevola, which is modern, individualistic, and in keeping with its locality.*

Figure **3** *solves the problem of introducing a substation into an ordinary urban street without making its presence either aggressively conspicuous or unduly self-effacing. Without diverging materially from the ordinary free-standing model of a railway substation, the architect of figure* **4** *has succeeded in evolving a rather more carefully-composed and sympathetic design than most of the examples to be found on the electrified suburban lines round Paris and London.*

BAIRD DENNISON

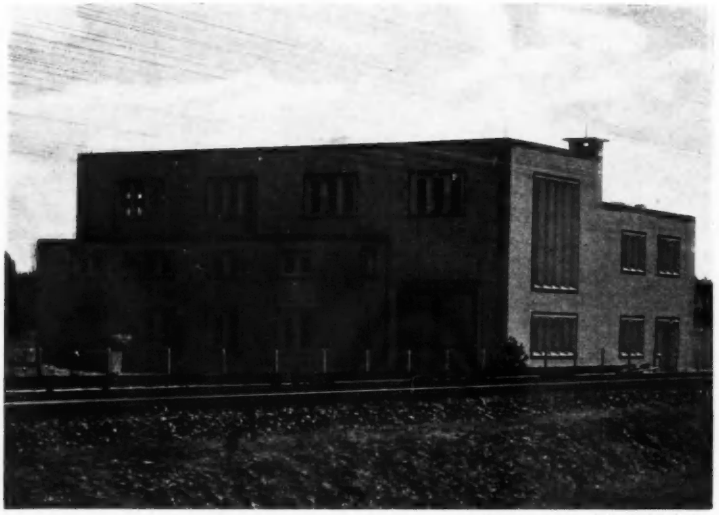


[*Alfred Grenander, Architect.*

2. *SWITCHBOARD OF THE HERMANNSTRASSE SUBSTATION, BERLIN UNDERGROUND RAILWAYS.*

[*Alfred Grenander, Architect.*

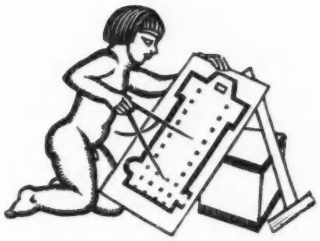
3. *EXTERIOR OF THE PANKSTRASSE SUBSTATION, BERLIN UNDERGROUND RAILWAYS.*



[*By courtesy of the Reichsbahn.*

4. *ORANIENBURG SUBSTATION, ON THE BERLIN ELECTRIFIED SUBURBAN LINES OF THE GERMAN REICHSBAHN.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, OCTOBER 14, 1931

"THIS ACUTE CONFUSION"

AFTER what always seems to be an interminable period the answers to questions posed by competitors in the R.I.B.A. New Premises Competition have appeared. In the main they are not unlike the answers given to innumerable competitors in hundreds of architectural competitions; except that for the first time there is made the point-blank inquiry —Will you accept a modern design?

The answer is: "This is a problem for which the competitor must find his solution in accordance with his own architectural convictions. Clear thinking, and a strict sense of fitness for purpose will do much to clear away *the acute architectural confusion* of which the competitor complains."

Now this question could never be asked were it not for the fact that the history of architectural competitions in recent years provides us with a series of minor victories for tradition and acceptable dullness. This may be merely a reflection of an outlook common to competitors and assessors, but it is much more likely to be one common to many competitors and *all* assessors, leaving out of the reckoning a body of architects intent upon winning the job of designing a large building, but unable to contemplate a labour which could not be expected to lead to success in face of the known prejudices of so many assessors against anything that could by any chance be called modern.

One has only to look at the schools of Dr. Schumacher of Hamburg, which we profess to admire, and at the winning designs of several recent school competitions (many of which, as readers will recall, have appeared in supplements to the JOURNAL during recent months), to realize the hopelessness of the situation for a young man with the intense desire to work to the top of his bent, untrammelled by the necessity for wondering whether the assessor will look only at definitely "scholastic" designs or will cast such prejudices aside.

The answer which the R.I.B.A. assessors gave is fair enough. It contains advice which, followed, would produce designs of which no one could be ashamed.

But there still remains that element of risk which occasioned the question—the risk that in this year of grace a board of eminent assessors, leaders of the R.I.B.A., could not be trusted to *think clearly* and judge a design *with a strict sense of its fitness for purpose.*

Well, there is nothing we can say to a competitor who estimates the nature of this risk other than that he must cease to regard it as influencing his design, and take heart of grace from the answer returned him. We must realize that, if it is true that architecture in this country is still a thing of hidebound tradition, ruled over by the elders, it will continue in the same, unless younger men are prepared to sacrifice themselves for what they stand for, and decline to make compromises to the ruling gods.

It is most fervently to be hoped that nothing in the composition of the board of assessors or in the programme of this competition—not even the necessity to build in stone—will turn away any who feel that the state of "acute architectural confusion" can be clarified by whatever contribution they themselves may bring. There has never been before an occasion where the pressure of new ideas and clear thinking was capable of greater effect, and no architectural competition in this country has held out a promise of unbiassed judgment equal to that which we may expect in this case.

"This is a problem for which the competitor must find his solution in accordance with his own architectural convictions." Clear thinking and a strict sense of fitness for purpose will clear away architectural confusion.

ST. MICHEL D'AIGUILLE, LE PUY, HAUTE LOIRE, FRANCE

The word "Puy" is a geological term, used locally in Auvergne for the remarkable volcanic hills which occur in the vicinity, of which this is a typical example. The tradition of building a sacred edifice on the very summit of a peak is of great antiquity. Many authorities hold that Solomon built the Temple at Jerusalem on the site now occupied by the Dome of the Temple, or Mosque of Omar, within which, today, travellers marvel at the living rock thrusting up its mighty mass.

St. Michel d'Aiguille is similarly moulded to the summit of its Puy, which it entirely covers—a building with nothing straight or square or axial about its lines.

NEWS & TOPICS

PRICES OF BUILDING MATERIALS

I HEAR unfortunate rumours that certain people connected with the building industry are taking advantage of the present crisis to exploit the situation selfishly and in a manner contrary to the interests of the industry as a whole. Manufacturers of some of the most commonly used building materials have decided to raise prices to their customers in the home market. Yet it has been pointed out by our greatest authorities on economics that the de-valuation of the pound should have no such effect on the home market, and the only people who should suffer by it are importers of goods from abroad, who must pay more for these because the pound is worth less in foreign countries than it was a few weeks ago. British manufacturers using home-produced raw materials are thus enjoying the same immunity from foreign competition as would result from a tariff, and those who have the well-being of the building industry at heart hope that they will be content with such an advantage without taking this opportunity to penalize their fellow-countrymen. The tendency of such manufacturers to raise prices at this moment would undoubtedly have a most injurious effect on the prospects of the building industry. In fact, now is rather the time to cut prices and thus to encourage building owners to proceed with their enterprises. If the opposite happens, we are indeed all of us in for a very much worse time than the world situation warrants.

THE LATE SIR BERTRAM MACKENNAL

It was with deep regret that I heard of the death, during the week-end, of Sir Bertram Mackennal, R.A. Born in Melbourne, sixty-eight years ago, the son of a sculptor, he came to London at the age of eighteen, chiefly to study the Elgin Marbles in the British Museum, and entered the Royal Academy Schools. A short time later he went to Paris, where he worked in several studios. His first calls to fame were made in 1889, when he won the competition for the decoration of Government House, Melbourne, and in 1893, when his statue " Circe " achieved a sensational public success, particularly in this country and in France. From this time he was flooded with commissions and became one of the most versatile and prolific sculptors of the day.

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I fancy that architects will chiefly remember him for his National Memorial to King Edward VII, executed in conjunction with Sir Edwin Lutyens as architect, and the public for his designs for the new coinage which superseded the Edwardian designs. Incidentally, he was the first Australian sculptor to become an Associate of the Royal Academy.

DECORATION OF THE NEW CUNARD LINER

The interesting announcement has been made that the design of the public passenger accommodation in the new giant liner now under construction at Clydebank for the Cunard Company is to be undertaken by Mr. Arthur Davis, of Mewès and Davis, in association with Mr. Benjamin Morris, of New York. No doubt their collaboration will produce that sense of co-ordination too often lacking in similar undertakings. Mr. Davis was, of course, the architect of the Cunard Company's new premises in London, and has been concerned with the decoration of many of their ships, including the *Aquitania*. Mr. Benjamin Morris is a member of the New York firm of architects, Morris and O'Connor, who designed the Cunard building in Broadway, New York.

OUR DYING [SIC] RURAL INDUSTRIES

Rural industries are a long time a-dying. They are not dying at all, as anyone who has followed this movement can tell you. Wherever the country is in fact rural, and not dependent upon the town, rural industries of centuries' growth continue to come naturally to countrymen and women, with the facility for direct expression and simple strong design that attend those who make independent use of hands and brain. If such industries as Welsh quilting were to perish the countryside would be badly lost to us, and it is wrong to think, as many do, that because we are asked to support a struggling home industry, an uneconomic and antediluvian activity is being needlessly bolstered up. I feel quite certain that every countryman whom we can teach the rudiments of an honest craft, be it iron-working or spray-painting, is a good man saved and made happy, productive where before he had been a problem for Westminster to squabble over.

THE CHAOS OF BUILDING REGULATIONS

Although we are assured by Mr. Shelley that we are all wrong, the chaos of building regulation continues to press heavily upon us. The Advisory Council of the Building Industry, set up by Mr. Arthur Greenwood, have adopted a resolution to be sent to the Ministry of Health, protesting once more against the lack of uniformity, the antiquity, and the state of chronic inco-ordination of building laws and bylaws, which make building in this country a hazardous undertaking. In London, for instance, seven consents are required for a theatre, and two distinct sets of officials have to be dealt with. Both sets give their decisions in their own particular spheres, and always without prejudice to the other set of officials.

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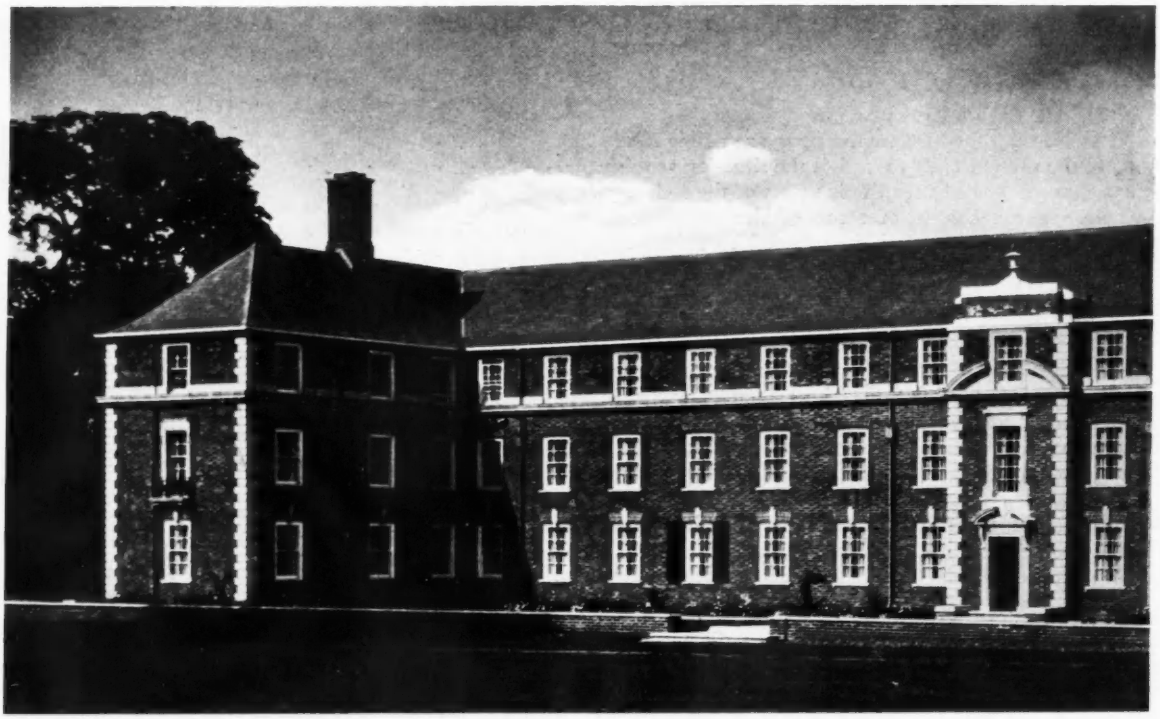
And so it goes on—rights of light, height, frontage, etc.—a long and terrifying list, stretched out and spread out before the prospective building-owner and his harassed architect. " Conditions such as these," comments the memorandum, " are not calculated to stimulate building or attract capital for similar enterprises."

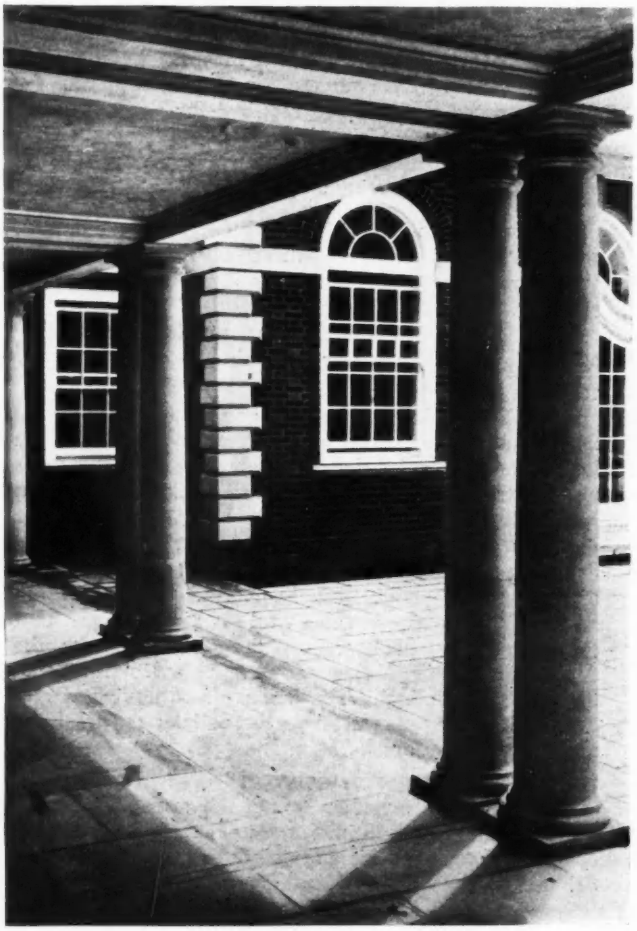
THE INDUSTRIAL SOUTH

Lord Londonderry, speaking at the opening of the new Aladdin factory at Greenford, Middlesex, on Thursday last, stressed the point that, at the present time, there was an industrial drift from the North of England to the area surrounding London. This made him wonder whether we were going to allow the new industrial area of the South to rival in bleakness and austerity the industrial areas of the Midlands and the North. There is, I am sure, only one answer to this vital question, namely, that the newcomers should follow the lead given by the Aladdin Industries and employ competent architects to design their buildings. The building was illustrated and described in the JOURNAL for August 12 last; the architects are Nicholas and Dixon-Spain.

THE SANITARY INSPECTOR-ARCHITECT !

The question of whether or not the sanitary inspector should assume the full-time duties of architect, or should combine these with his normal duties, has been hotly debated by the Llanelly Rural Council. The democratic system is at work before our eyes ! ASTRAGAL





The photograph running across the tops of this and the facing pages shows the main or garden entrance of the new hostel, which takes its place in the grounds of Wotton House, an eighteenth-century building. Over eighty study-bedrooms are

A corner of the cloisters which provide covered access from the main block, shown above, to the common and dining-room blocks.

WOTTON HOUSE,

New Hostel

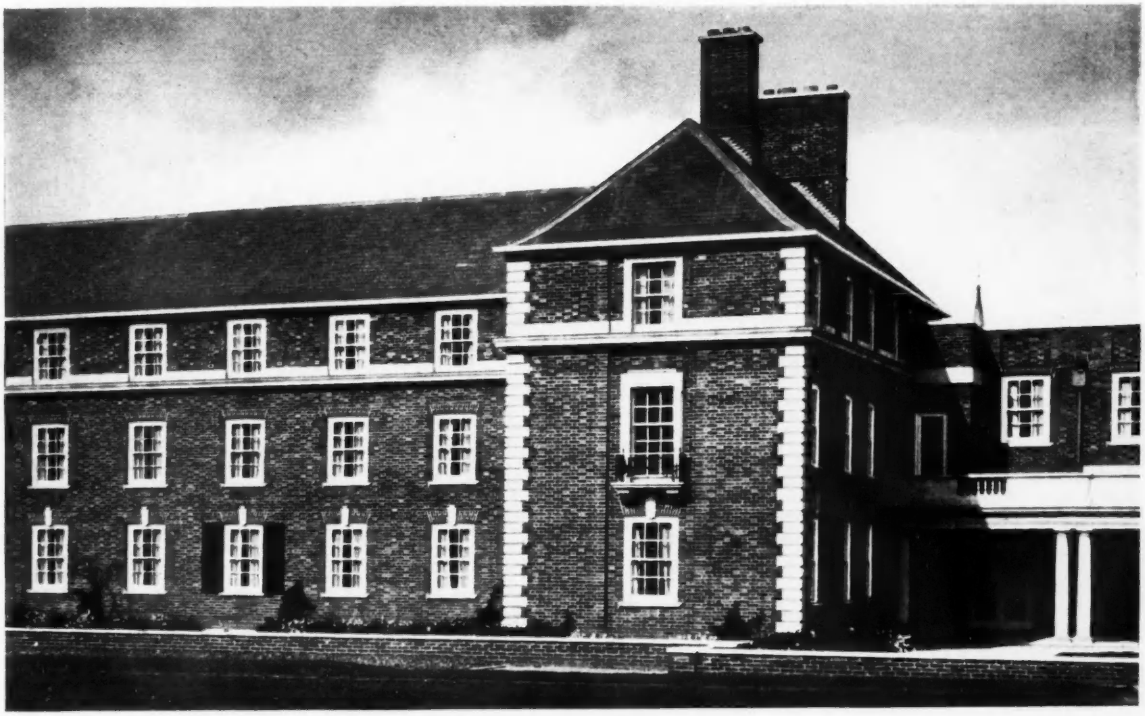
DESIGNED BY

THIS hostel has been erected by the Gloucestershire County Council to accommodate students attending the Gloucestershire Training College of Domestic Science. The building stands in the grounds of, and is attached to, Wotton House, a domestic building erected in the early part of the eighteenth century.

The hostel contains eighty-one study-bedrooms, most of which are single, and have a south aspect. The sanitary wings are placed on the north side of the building.

The plan is, in fact, logical, compact and hygienic, but it would have been impossible to give the boon of direct sunlight to so large a proportion of the rooms had the vogue of placing the communal rooms, required for dining and recreation purposes in an establishment of this kind, in a central position in the main block been followed.

The site conditions made it feasible to plot them elsewhere: accordingly the common room and its companion dining-room, with their adjuncts of ante-room and kitchen quarters respectively, occupy single-story wings. Access to them and, eventually, to the corridor connecting with the existing building is provided by means of covered cloisters, open to the terraces on one side.



GLOUCESTER

for Students

R. S. PHILLIPS

At the same time, the pretext for a pleasing central feature of the main elevation, which faces the garden, was supplied in the principal entrance. The entire design achieves unity from the consistent employment of the simple contrasts between two age-old structural materials : brick and stone.

The walls are of brickwork faced with 2½-in. multi-coloured rustic facing bricks with cream-coloured joints, and the cornice and dressings are of reconstructed Bath stone.

The floors above the kitchen, etc., and the floors of the corridors are of fireproof construction, laid with oak blocks. Other floors are laid with Columbian pine.

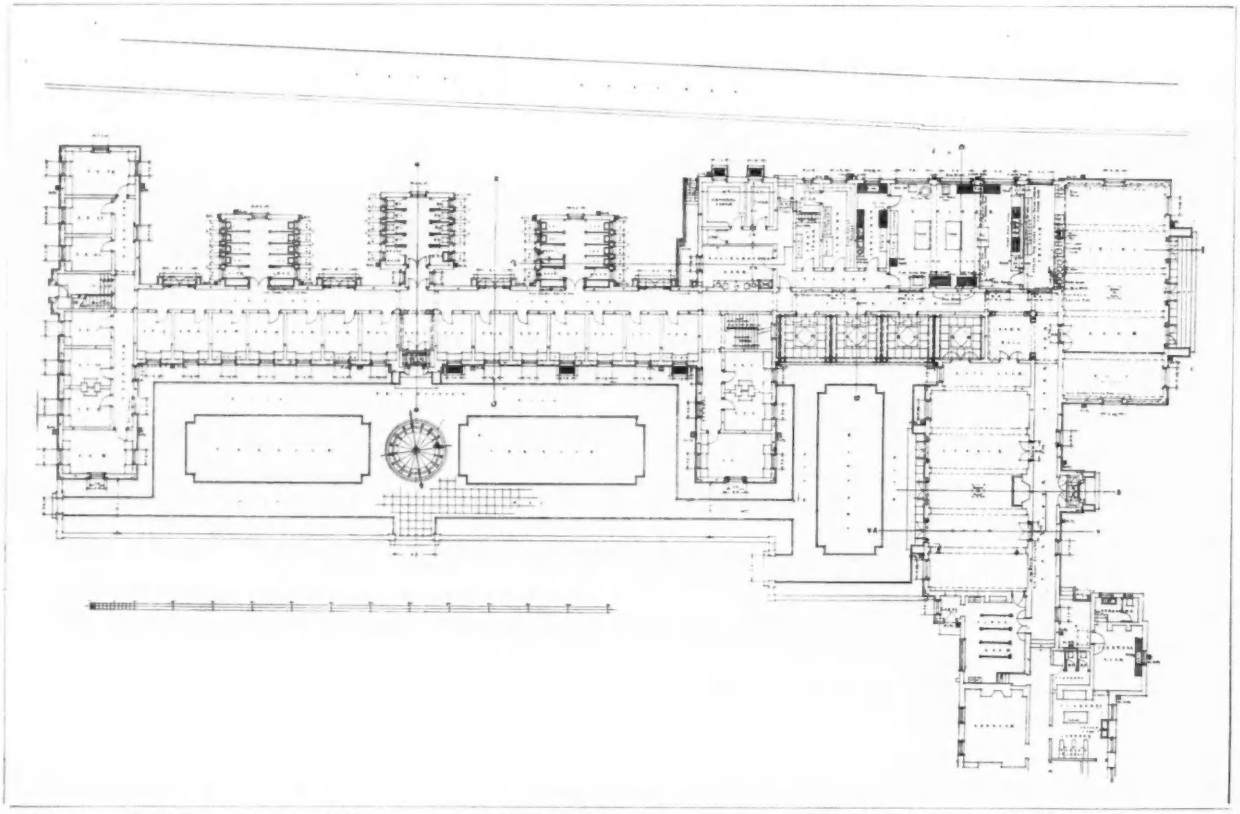
The staff of the college have applied the latest principles of time-and-motion studies to the kitchens, and all labour-saving items of equipment are so placed in relation to each other as to reach their maximum degree of efficiency.

In the offices, dining-room and sick-room, labour-making ornament has been avoided and the rooms depend for beauty on line, proportion and colour.

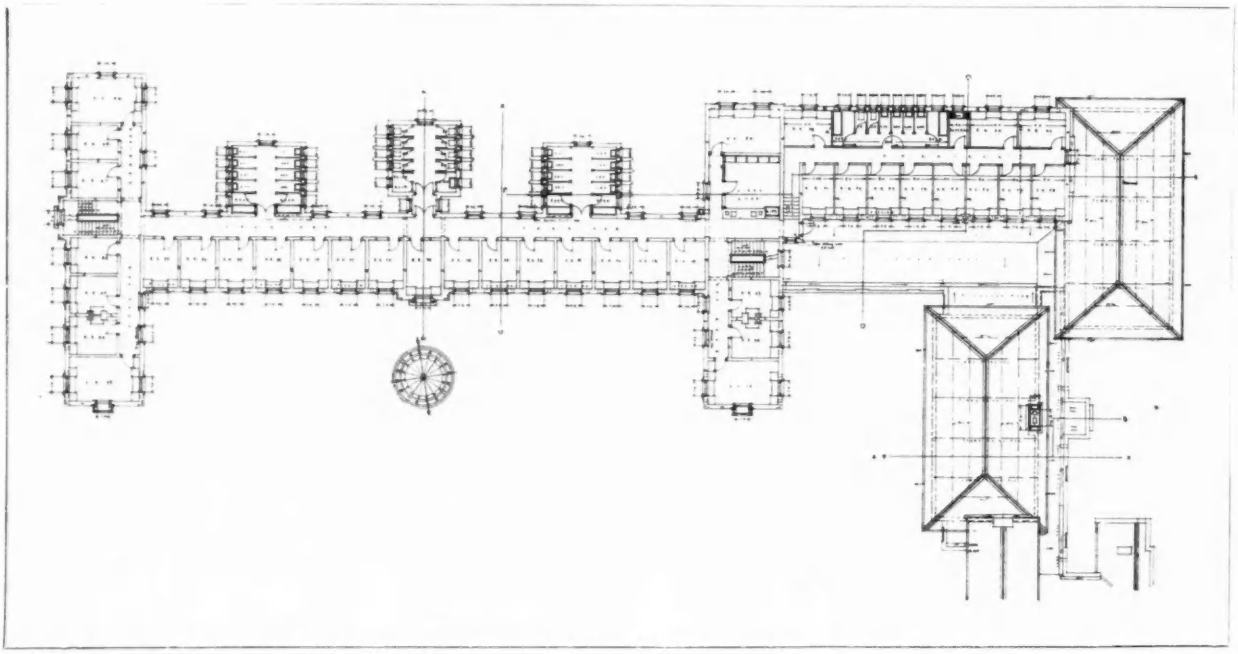
The cost of the building, including heating, lighting, work to site, kitchen equipment and the oak fittings in the study - bedrooms, has amounted to approximately £34,500.

provided on the ground and upper floors, most of which look south on to the terrace. The colonnaded veranda on the right connects with the common room and dining - room (see pages 493–4), and eventually provides a link with the old building.

The main (terrace) entrance. The walls are of small multi-coloured rustic bricks; and the dressings are of reconstructed Bath stone.

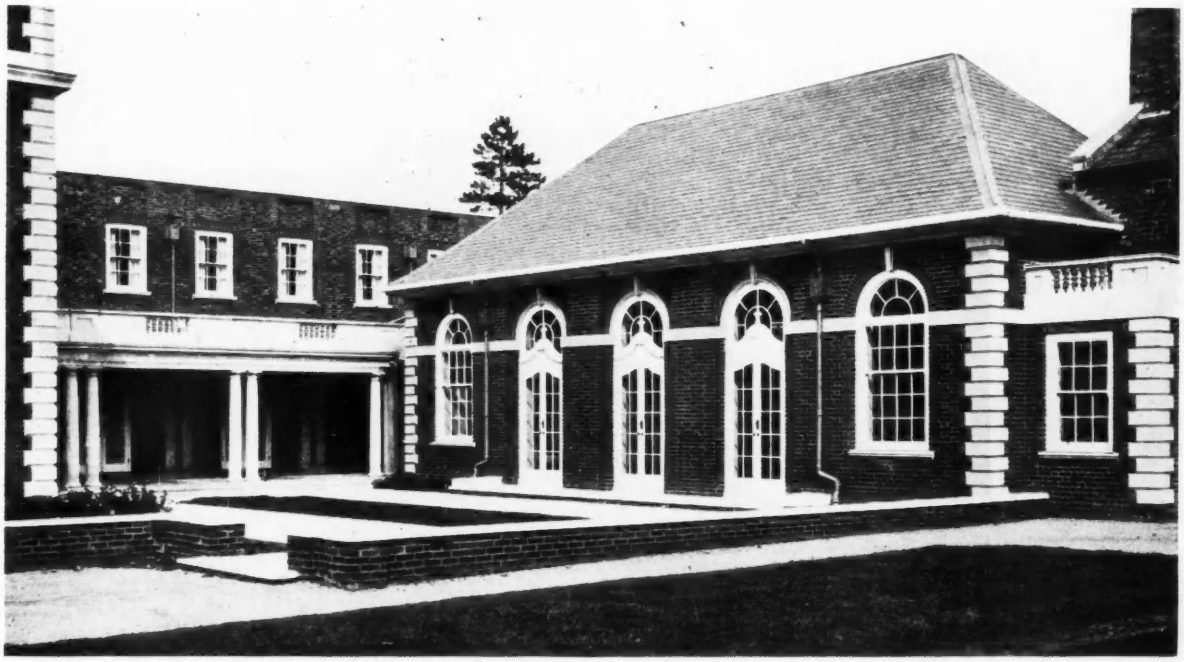


The ground plan is typical of all, in its concentration of the bedroom accommodation in the main block. On the right are seen the common room, and, behind it, the dining-room, both housed in a single story, and with kitchen quarters in proximity.

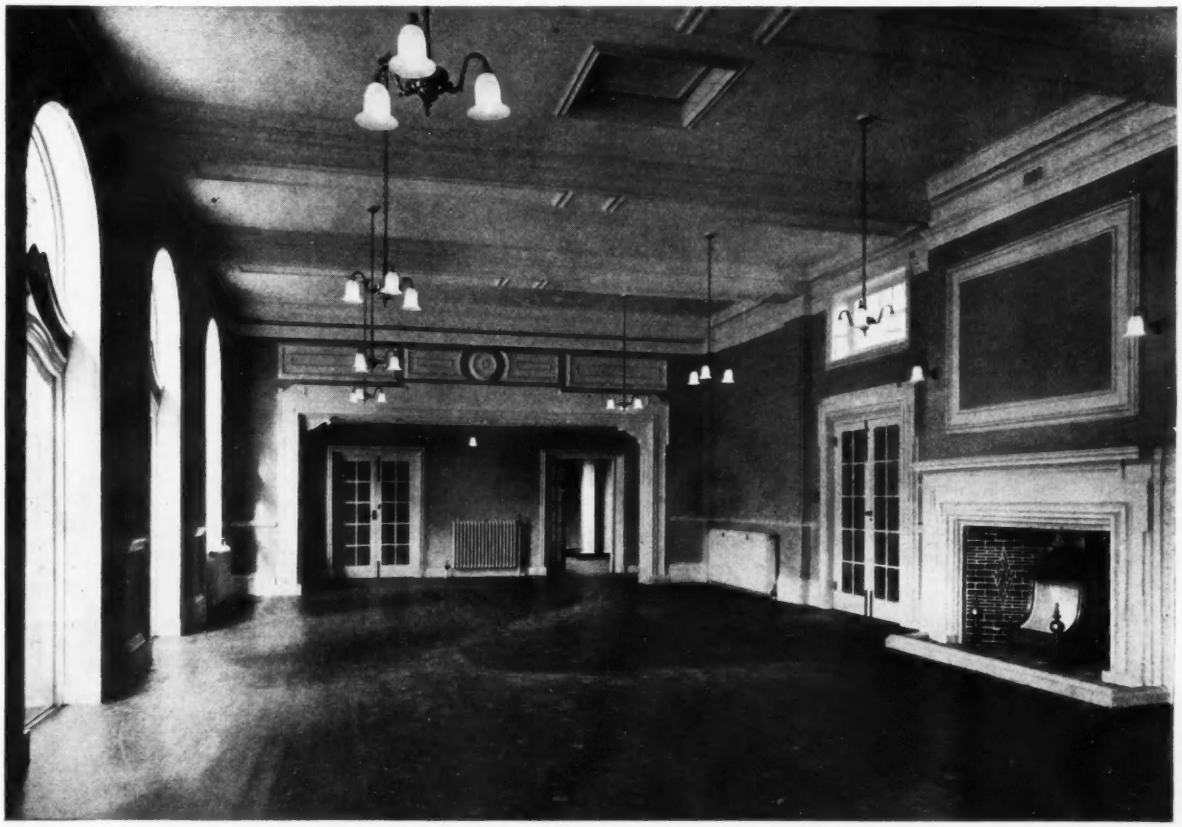


Wotton House Hostel, Gloucester.]

The main block first floor is devoted entirely to study-bedrooms and lavatory accommodation. The layout of the second floor is similar, except that, at the south-west corner, a small hospital ward, with observation and nurse's rooms, is included.

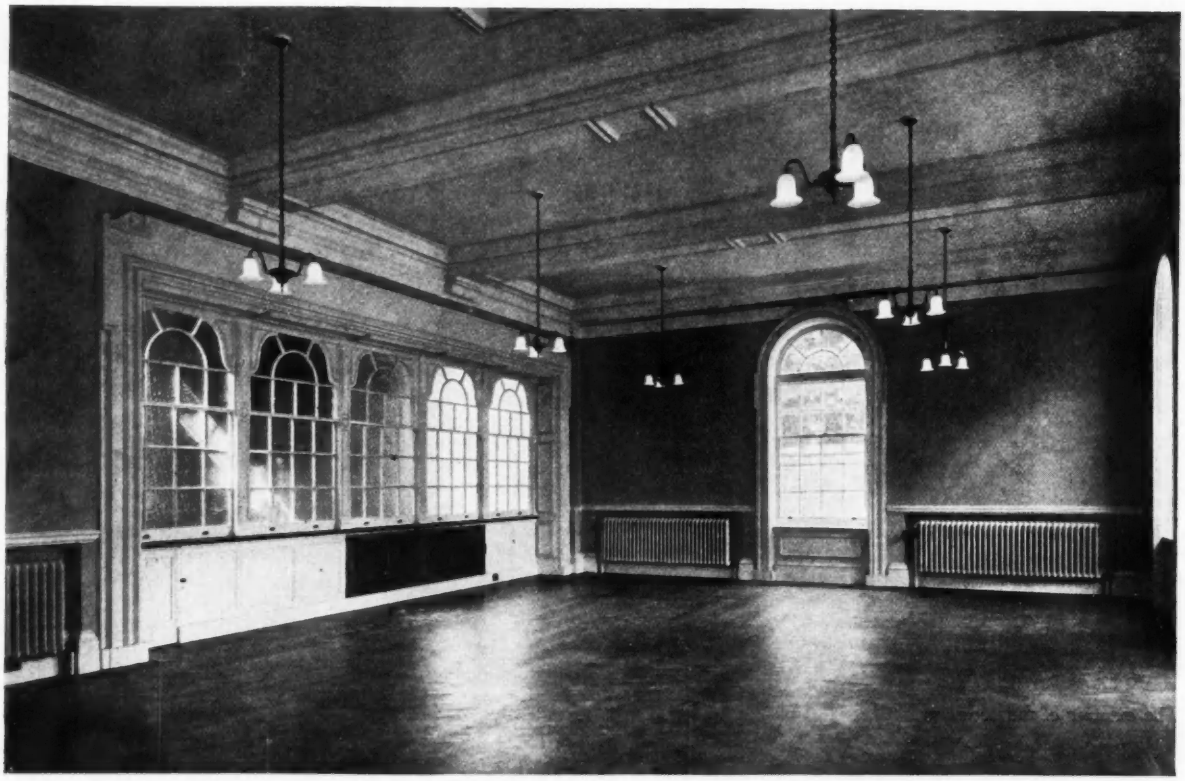


The exterior of the common room. This picture continues from the right of the photograph reproduced across the tops of pages 490–1, and the two together enable the main points of the entire scheme to be visualized.

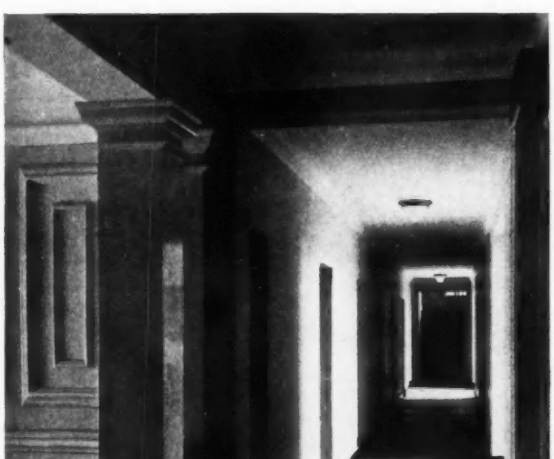


[*By R. S. Phillips.*

In the common room. Beyond the fireplace on the right are doors from a corridor leading to the dining-room; those seen in the farther wall lead (left) to the inner hall, approached by the covered cloisters, and (right) to the ante-room.

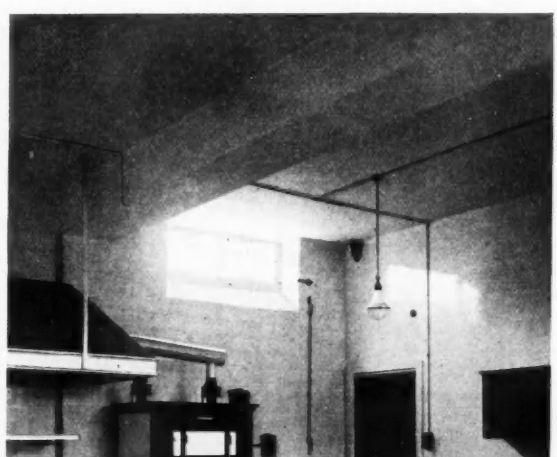


An interior view of the dining-room. It has been an object to eliminate dust-catching, and therefore labour-making, ornament, and the general effect relies on the lines and proportions of the design.



Wotton House Hostel, Gloucester.]

A typical corridor. All the corridor floors are of fireproof construction, and are laid with oak blocks.



[*By R. S. Phillips.*

A corner of the kitchen which faces the dining-room, but is divided from it by a corridor.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xxi

I QUARREL WITH MY PARTNER

BY KARSHISH

(H. B. CRESWELL)

IT was in the year after my marriage that Garston brought down the nuts from the tree into which, for seven years, he had been throwing sticks with such undeviating pertinacity and courage. During those years he had competed for eleven important public buildings at home or in the colonies, and for other smaller works, though he always said that the law of chances made it easier to win a big competition than a small one.

The year 1904 saw Philip Garston pass at one stride from the ranks of promising students to those of conspicuous architects—from impoverishment to affluence, from neglect to solicitude, from obscurity to fame; for in that year his design for the Bolchester Town Hall, costing £240,000 — or nearly half a million at present values —was chosen from among those of one hundred and seven competitors, including many of the leading architects in the Empire; and before he had had time to realize the magnitude of his success he received a totally unexpected telegram from Cambridge, signed " Clapcabbage," asking him to keep an appointment at Ashley College, where the Provost told him that his design in competition for the College Library and Chapel building, which had been for months shrouded in the mystery of wranglings behind closed doors, had been accepted. This commission, which resulted in Garston's best-admired work, conferred upon him the blue ribbon of professional attainment of those days. He was a made man.

As I have already said, there had never been any partnership arrangement between Garston and me. Before I was employed by the Eureka Plough Company at Nollingborough, I was giving all my available time to working on competitions with Garston; but the designs were always regarded as Garston's: it was he who initiated each adventure and bore the whole cost, and to whatever extent my suggestions may have been embodied in his schemes or my ideas in his elevations, all decisions were made by Garston and the drawings were sent in under his name. It was, however, clearly in our adventurous boyish minds, beyond any need for formulating the intention, that if success came I should give up the work by which I contrived to earn a living and join forces with him.

After I went to Nollingborough I gave my evenings to finishing up and printing on his drawings, and continued always to make any perspectives that were wanted. I also frequently tackled the Conditions independently of Garston and got out preliminary schemes which he might or might not make use of, but which, at least, tested possibilities and cleared the way for him. I also, in finishing drawings, often worked up his elevations, and, for months at a time, spent week-ends at Charles Street helping to push things along. But when I began to get busy in private practice I took less and less part in these speculations. I did, however, spend a good deal of time torturing a difficult corner of Garston's first Bolchester layout, which at least had the usefulness of convincing Garston that that scheme would not do, and inducing him to discard it in favour of that which brought him success. I also worked over his Library elevations on tracing paper, and two of my ideas are represented in the building as it now stands; and, as a matter of course, I made perspectives in both competitions.

Our financial arrangements were equally casual and happy-go-lucky. I never paid Garston anything for the use of his office as my headquarters, nor anything on account of office expenses, except that when, on two occasions when he was hard pressed, I made surveys and got out contract particulars for scraps of private work he had, and he helped me with three similar little worries of mine in London by representing me with clients and overlooking the work. We divided the plunder; but Garston never shared in any of my Nollingborough work. When Garston in 1901 won a second premium of a hundred and fifty pounds in the Padilloes Public Baths Competition, he insisted on my taking fifty of it; and when I pointed out that the design was his, that my work did not represent a sixth part of the labour of producing the drawings, and that I had met none of the cost, he told me he regarded the premium as the proceeds of the whole of the competition work in which I had lent a hand. It was Garston's generosity in this matter, as will be seen, that later made grounds for our quarrelling.

When Garston's fortunes suddenly soared to these undreamed-of heights he wrote in his frank, incisive way, leaving it for me to say whether I would throw in my lot with him or not; but he made it clear that if I did so I must move up to London. This meant that I should be obliged to give up my fast-growing Nollingborough connection—for to leave the place would have been to drop out of remembrance there completely—identify myself with Garston's fortunes, put aside my individual ambitions and adopt his. I was supremely happy in my brand-new country home amid surroundings beloved of Nancy; and was entirely devoted to my work, which provided a succession of delightful adventures in which I continually surprised unexpected capacities in myself which excited me by raising images of all kinds of wonderful achievements in the future. I had, in fact, tasted blood: I had acquired that insatiable appetite for self-expression which is the glory of the architect's calling and, as I believe, the supreme thing in life.

Garston's personality was so masterful, his decisions were so vigorous, his judgments so firm and his mind so active, that I felt that the more delicate plant I nurtured would be choked among his robuster growths; for, capable as he was, his taste differed from mine considerably. I accordingly replied to him that I could not break up my home and relinquish my practice at Nollingborough, but that this would be no obstacle to partnership, as I could be in town two days a week or more; could work as effectively in Nollingborough as in London; and that we should obviously prosper better if we joined fortunes than if I merely shared his. His reply was brief:

My Dear Twitters,

I must have you body and soul or not at all. You do not realize the immensity of the thing that has happened. The Universal Bank wants me! Life is a turmoil—*and* the eating and drinking! I shall have soon to wear a harness to support my belly. Choose, my dear fellow. I shall quite understand if you decide to go your own way. I move into the new offices on Wednesday.

Ever yours.

It was evident that Garston wanted more from me than he supposed I would be willing to give, so that even if I had previously decided to join him his letter would have made me change my mind. Nancy also had to be reckoned with. For some extraordinary reason she took a strong dislike to Garston before she ever saw him, so that I learnt to check myself when on the point of speaking of him, or quoting his sayings, to her; and even after Gar spent a week-end with us, when he was in his best form and most attentive to her, Nancy was grudging of any good word for him, and met my expostulations by shrugging her

shoulders and telling me I was an "infatuated old Pigeon." When I put the case of the partnership to her and showed her Garston's letters she said: "It would not suit you, Pidge—you ought to make your own career, not Mr. Garston's. Architecture is not all banks and town halls, and your gifts—your sympathies—lie in other directions; but do not answer Mr. Garston's letter for three days. Promise?"

I gave her the promise, and on the third day knew why she had exacted it when she showed me a letter from her solicitor who, in answer to questions she had referred to him, gave it as his opinion that my relations with Garston in the past constituted a partnership, and that a separation could only be on terms to be agreed between us, or settled by reference to arbitration, or by an action at law. That, at least, was the significance of his letter, which informed me for the first time of the trivial circumstances which the law will hold to set up a partnership, and the rigidity with which it enforces the obligations of partnership. Garston and I were, in fact, partners; and I was entitled to share in the "profits" that had accrued, though how those "profits" and my share in them were to be determined, I had no idea.

Nancy had started the hare and it was she who hunted it. I cannot recall all the reasons she urged why I should, in violence to all my instincts, claim my rights; but she insisted, among other things, not only that my ideas might have decided Garston's success, but that they must necessarily have been factors in it; that if the law decreed that Garston was liable to me it was not for him to settle that he was not; and that as he had met the whole cost of the competition in which he voluntarily paid me a one-third share of the proceeds, he had virtually acknowledged that I was entitled to share net profits with him, equally.

She pointed out that for years we had been partners in speculations with a view to mutually benefiting if any were successful; that if success had rewarded us three years earlier I should have shared that success as a matter of course, as, in his letter, Garston admitted I was still entitled to do; so that if I elected to forgo that right it would be no hardship to Garston to pay me a sum representing part of the gain to him of my relinquishing my share in the practice.

The matter was merely a business adjustment, she said; and a friendship that was unable to recognize the ordinary obligations of men was of so little account that it was not worth preserving.

Nancy said much more; and she also blamed me, as she often did, for my reluctance to "assert my rights"—as she termed it—and my hesitation to claim my dues when circumstances made it in the least embarrassing to do so. The result was that I wrote Garston a letter—the draft of which Nancy approved—which I have all my life since regretted. I presented the case to him as a statement of abstract principles, but said that as he would benefit financially from our separation I supposed he would wish to square the account so that there should be no grounds for discontent in the minds of either of us.

I am not going to reproduce that letter, for I am ashamed of it: it was not the sort of letter I could have written to Garston out of my free discretion. Neither am I going to give the letter I received by return of post from Garston, in reply; partly because it is false to his generous nature, and partly because of his searching comments on myself. He wrote, with his characteristic impulsiveness, on the spur of the moment, at a time when he was suffering from strain, and gave his extraordinary gift of pungent statement full rein. He concluded: "As you have evidently taken Counsel's opinion on the quality of the friendship which offered you a share in my fortunes, you had better take it again on the quality of the common sense which now withdraws the offer."

Nancy was indignant. She had always, she said, known exactly the sort of man Garston was, but had refrained from telling me so as to spare my feelings; but I could now see what he was for myself, and deal with him accordingly. I was so angered at some of Garston's cutting aspersions that I did not resist this view of him. Several bitter letters passed between us. We avoided meeting. Weeks went by. Nancy urged me to make a definite claim and had decided that Garston ought to pay me at least three thousand pounds; and when I hesitated to do this—for I felt unable to form any idea of what I was justly entitled to—she wanted me to put the matter in the hands of solicitors. I was actually contemplating taking this deplorable step when I received the following letter from Garston:

My Dear Old Twitters,

Burn all those damned letters of mine like a good fellow and forget all about them for old times' sake. I have been so strained and overburdened and worried for money to carry on with, that I have been half off my head. Yesterday I got out to West Wickham with Gwen for a long day in the beech woods, and came to my senses. The idea of dirty, idiotic, futile, squalid money coming between us is impossible. Think of it! I believe I owe more to your companionship than to anything in life. The idea of falling out with you on such a question as *money* is sheer insanity. Are we in Hell already?

What we must do is to ask some sordid brute to settle our account. I shall be perfectly satisfied to abide by what he says and I know you will be; but I would much rather you said what will meet your views and I will pay. If, however, I have the least feeling that you are opening your old mouth too widely I will tell you and we can then fall back on the first idea—I mean that there must be no grievance in the mind of either of us. I have none in making this proposal, for I realize that if our positions were reversed I should feel just as you do. It is, as you say, just a matter of business.

No doubt you will let the payment be over a term of years so that I can pay out of future earnings, for I am fearfully pushed to meet office expenses and Gwen and I hope to be married before the end of the year. In fact, I *can't* pay spot cash: technically, I am broke.

Ever yours, my dear T.,

GAR

I did not show this letter to Nancy; I did not even deliberate, but sent Garston my answer by return of post, which was that I accepted his second alternative and that the amount I named as acceptable to me in settlement was a sixpence to wear on my watch-chain as a memento of his success. When this letter had been posted my relief at being unburdened of the misery of the past weeks, and my joy in the re-establishment of our friendship, was unbounded.

From one extreme of feeling I went to the other, and it became inconceivable to me how I could ever have reconciled myself to taking toll of Garston's earnings after his long struggle to place himself in a position to earn anything. This was the sense of the matter that was natural to me; and I was so sure of myself that I would allow Nancy no more to influence me. Directly she saw me she expected to hear good news, and we had our first, real, fully-staged, almighty matrimonial row when she heard what that good news was.

She said that I thought more of Garston than I did of her; that he was a sly, boorish, self-centred man, who could twiddle me round his thumb; that his letter was a mere device to undermine my purpose; that anyone but I would have realized, years before, what a hypocrite the man was; that I thought of no one but myself and did not consider that she would suffer by the loss of three or four thousand pounds much more than I would, for I had my work to interest me and she nothing but whatever amusements she

could make for herself; that I was a most hopeless person to try and help; that my ambitions were trivial; that I did not take advantage of my opportunities; that being married to me was like being chained to a dead elephant; and that I did not care for her the least little bit. That is all I need report except that the tears in which our difference was forgotten were not mine.

My difference with Garston was, however, not so easily settled, for it became as difficult for us to agree that our account was all square as it had been to agree that it was not, and each of us was soon using for his new purpose the arguments that the other had advanced for the old one. I was finally compelled to agree to Garston's paying me two hundred pounds a year for five years, and as he was soon making four or five times as much as I was, I had little more compunction in cashing his cheques than he had reluctance in drawing them. In after years, when Garston and his wife came to stay with us from time to time, Nancy and Gar became friends. She said marriage had improved him. In this, however, she was entirely wrong. She never knew Garston in the old days when we used to bolt out of the office and dine on sandwiches and London stout at Pimm's, in Fleet Street, before settling down to a last session of T-square and dividers.

I have in my life observed many "dissolutions of partnership" among architects, but I do not remember any case where friendship has survived the rupture. My relations with Garston were unusual, but that unusualness was fruitful ground for misunderstandings and a bitter quarrel. I always regard it as one of the happiest events in my life that we escaped that calamity, and that the memory I have of Philip Garston is a continual happiness to me and not something very different.

NEXT WEEK: XXII—THE FUN OF THE FAIR

The previous instalments appeared as follows:—

May	27.	i: I am Articled.
June	3.	ii: Episodes of Pupilage.
June	10.	iii: Episodes of Growth.
June	17.	iv: My First Job: The Sewer.
June	24.	v: My First Job: The "Pipes."
July	1.	vi: I Turn Clerk of Works.
July	8.	vii: Bradshaw & Son: Builders.
July	15.	viii: Joe Richards: Foreman.
July	22.	ix: Trials of a Clerk of Works.
July	29.	x: A New Venture.
Aug.	5.	xi: The Resident Architect.
Aug.	12.	xii: An Architect's Early Gruel.
Aug.	19.	xiii: An Uphill Fight.
Aug.	26.	xiv: A Disaster.
Sept.	2.	xv: The Law's Majesty.
Sept.	9.	xvi: A Failure and a Success.
Sept.	16.	xvii: Private Practice at Last.
Sept.	23.	xviii: Provincial Practice.
Sept.	30.	xix: Forging Ahead.
Oct.	7.	xx: An Architect's Wife.

LETTERS FROM READERS

Quantities for the Smaller House

SIR,—I have been surprised of late by the number of architects who avoid the use of bills of quantities for the smaller house—the house, say, of a price in the region of £1,500.

There does not appear to be any semblance of a line which can be drawn between the really small type of house, which the average builder is supposed to price without difficulty, and the larger erection for which bills are considered absolutely necessary.

I have known architects place before builders schemes for work amounting to over £2,000, some including alterations, and expecting to get real competitive tenders. Possibly, sometimes, they greet the result with joy when some unfortunate builder, making a glorious guess, secures the contract at a low figure and finds himself well out of pocket on completion of the work.

By a guess I do not mean that a builder, if he really has any intention of trying to secure the work, will produce his price without paying any attention to figures.

I understand that some builders, although I am sure not many, base their estimates on the cube of a building, adding to their cubic figure lump sums for any special work such as an open fire with a briquette surround and hearth and such like.

A cubic figure is all very well for the provision by an architect to a client of an approximate estimate, but its value ends there, and the result is a very uncertain price.

Keen builders take out rough quantities when drawings and specification only are provided, and as they have no time, nor can they expend the money to produce anything approaching full quantities, the result is that they are forced to add a percentage upon the price their rough figures produce; a percentage which varies with the care which has been given to the production of their quantities.

The increase in the use of new materials in present-day building makes it necessary for the builder to estimate with much more care.

It is unfair to expect a builder to enter into competition for work without a sound basis upon which to start this work, and whereas the architect professes to save a client money if employed in preference to the acquisition of houses erected by a speculating builder, I consider that the inclusion of quantities is also a necessity to produce for the client a building which will give value for his money.

Architects seem to be very seldom seriously employed in connection with houses below £1,000, and although possibly many would treat with scorn any suggestion that quantities are of value for all work over that figure, I trust that others would not.

W. D.

Cavity Walls

SIR,—My quotation of Dartmoor, in a letter of mine on the above subject, published in the JOURNAL for August 26, was just an example of a weather-beaten area where hollow walling of ordinary construction, i.e. two 4½-in. thicknesses, would lead to failure, and there is a similar possibility on cliff sites.

I do not mean that hollow walling is of no value on sites such as these, but that more than a 4½-in. outer thickness of brickwork is necessary.

I have seen buildings on Dartmoor erected of local stone 12 ins. to 18 ins. in thickness with a cavity, and a 4½-in. inner brick skin.

I am in total disagreement with Mr. Beeston as regards the construction of the bottom of the cavity wall.

The filling of concrete not only strengthens the base of the wall, but provides an outlet above ground level for any moisture which may accumulate, by way of the open joints left in the brickwork.

By leaving the cavity open as far as the concrete, with, I presume, a number of weepholes below ground level, Mr. Beeston suggests (see issue for September 30) a badly constructed base, the possibility of an inadequate outlet for the dispersal of water (if water does really accumulate in the cavity) and an inlet for moisture and water by way of the earth.

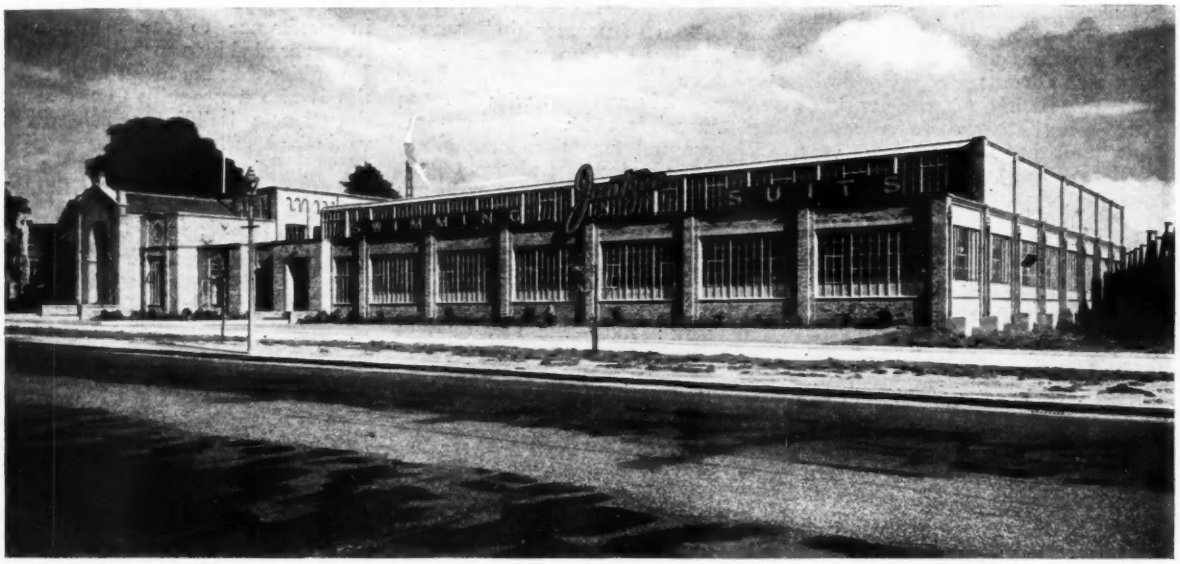
I do not like to doubt Mr. Beeston when he says that water will stream down the inner face of the outer skin of brickwork of a hollow wall, for I have never witnessed the result of driving rain upon the inner face, but then whilst I am wholly in favour of this type of construction I would not consider building the outer thickness in 4½-in. work in abnormal situations.

G. E. D.

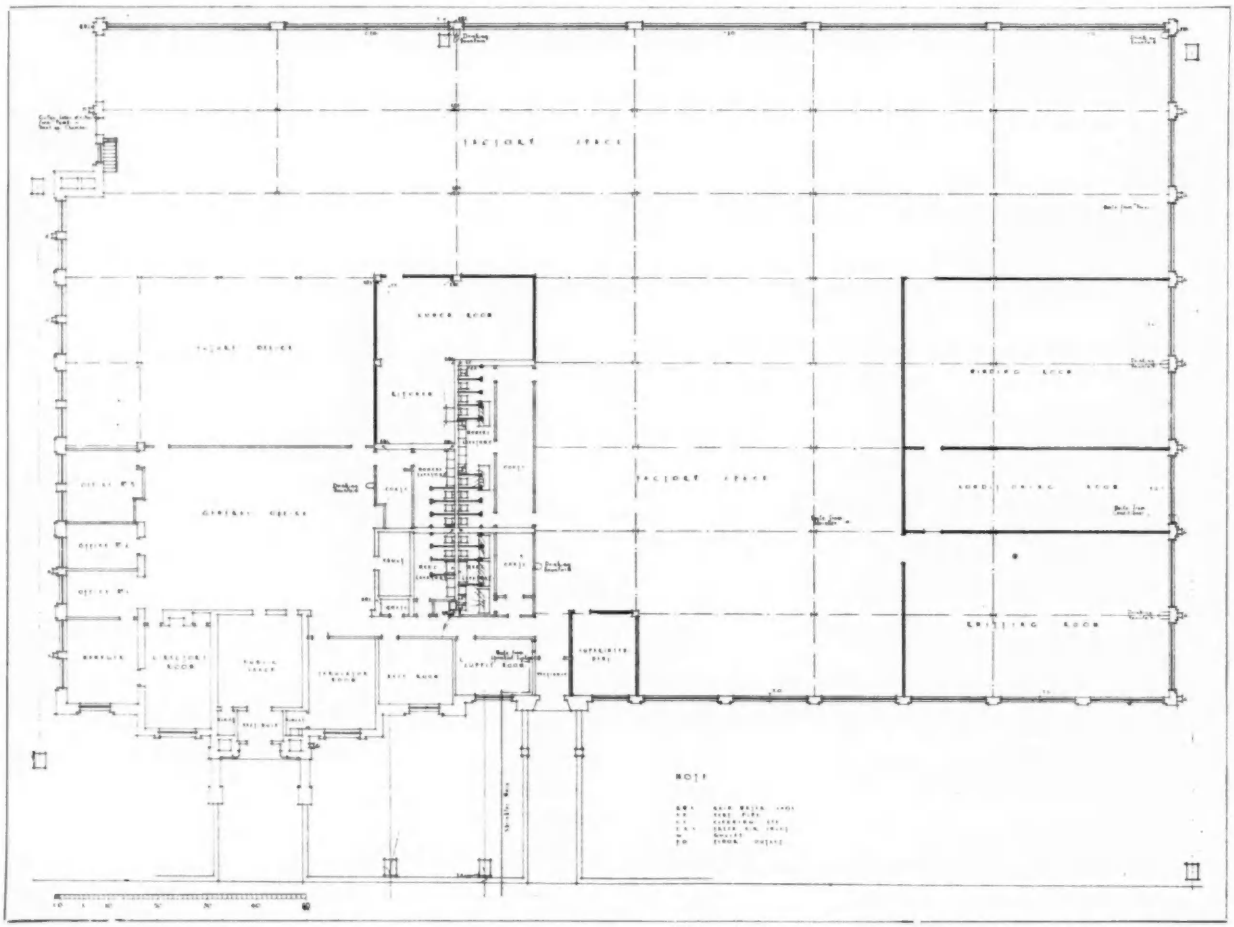
Copper as Damp-proof Coursing

SIR,—I am very much interested to know if any of your readers has experience of the use of sheet copper in strip form for damp-proof coursing.

F.R.I.B.A.



A general view of the front to the Great West Road, Brentford; the building is, as far as possible, a reproduction of the Jantzen headquarters in U.S.A., and was erected from the original plans of Richard Sundeleaf, of Portland, Oregon, U.S.A.



[*Constantine and Vernon, Supervising Architects.*

THE JANTZEN KNITTING MILLS

The layout has been designed expressly to accommodate the plant required in the various processes of manufacture of swimming suits from the yarn. It will be noted that all the lavatories are planned within the main body of the building, and have, therefore, to comply with English bylaws, to be mechanically ventilated.

THE JANTZEN KNITTING MILLS,

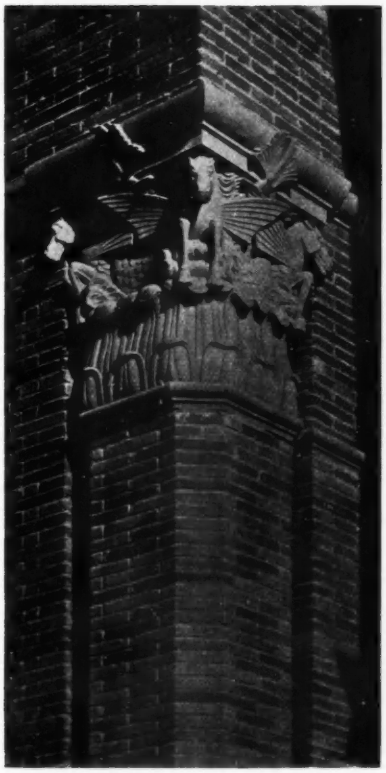
Great West Road, W.

CONSTANTINE AND VERNON, SUPERVISING ARCHITECTS

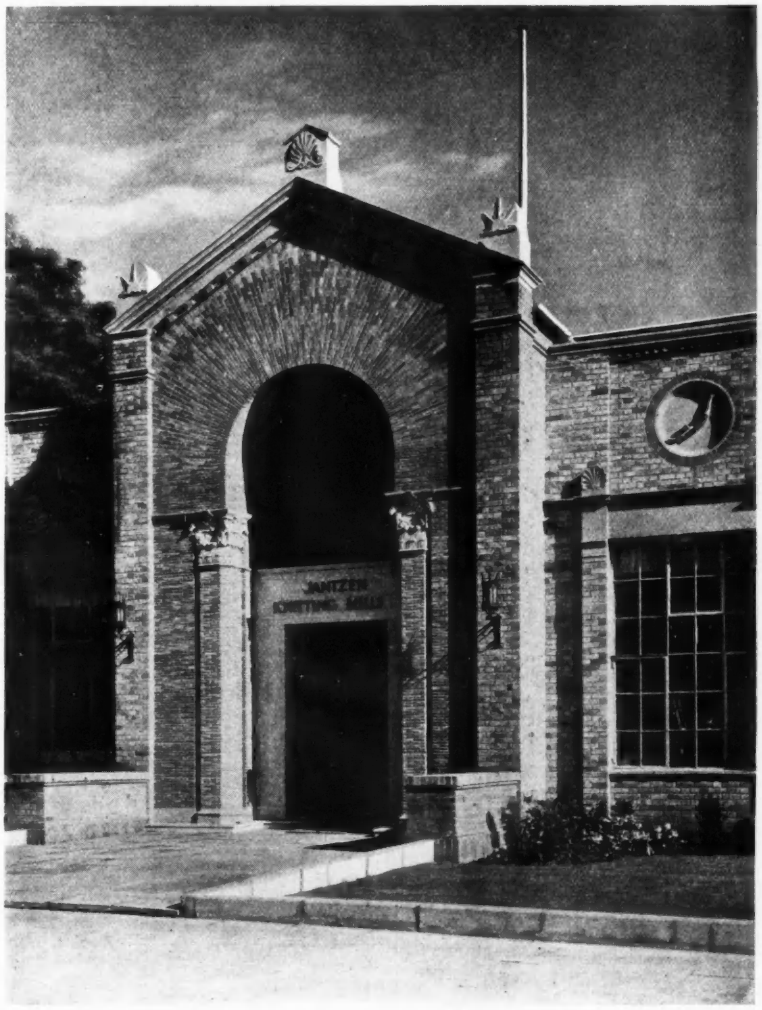
THE buildings here illustrated have been built from the original layout plans supplied by Mr. Richard Sundeleaf, of Portland, Oregon, U.S.A., and have been erected under the superintendence of Messrs. Constantine and Vernon. The plans provide for a factory building accommodating all the plant for the actual manufacture from the yarn of the well-known Jantzen Swimming Suit, with all its processes, which include conditioning of the yarn, pressing, cutting and sewing.

It was desired that this building should, as near as possible, match in tone, colour and details, Messrs. Jantzen's headquarters in America, and the brick and stonework is as near as possible a replica of the aforesaid building, special facing bricks of an orange-gold tint having been utilized.

Generally, the construction of the building, as erected, is upon orthodox lines of factory construction in this country, with the exception that the saw-tooth roofs of the factory section have vertical glazing, with opening lights, in place of the usual sloping patent glazing used in this type of building.



A detail of one of the carved stone capitals occurring at the main entrance, illustrated above.



The main entrance, in the front shown as a whole in the photograph reproduced on the facing page, owes a good deal to the orange tone of the facing bricks employed, and its contrast with the stonework.

The principal offices in the administration building are panelled in Austrian oak, and the general office, which is approximately 30 ft. high, is well lighted by clerestory windows. The heating installation, which is on the unit system, has been designed to give an internal temperature throughout of 70° when the outside temperature is 35°. The installation is on the low-pressure steam system, and the whole plant is under thermostatic control. Free steam is used in the various machines.

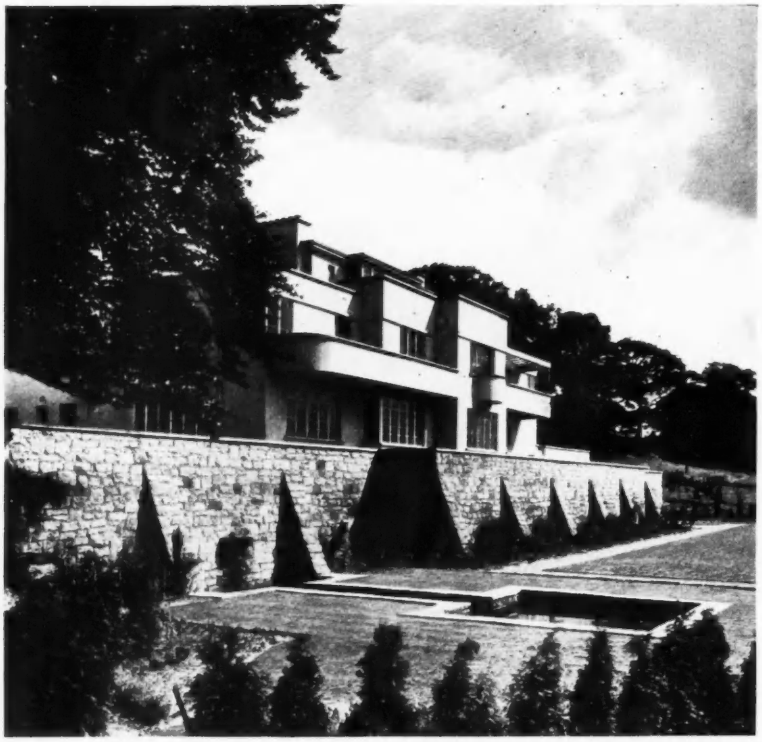
The interior planning is a little unusual, as the whole of the sanitary arrangements are within the building and, in order to accord with the local bylaws, are mechanically ventilated. The whole of the drainage is constructed in heavy iron, the manholes and gullies having access from a space specially provided under the main floor.

R.I.B.A. Surveyors' Examination

The R.I.B.A. Statutory Examination for the office of district surveyor under the London Building Acts, and the examination for the office of building surveyor under local authorities, will be held at the R.I.B.A., on May 4, 5 and 6, 1932.

The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is April 13, 1932.

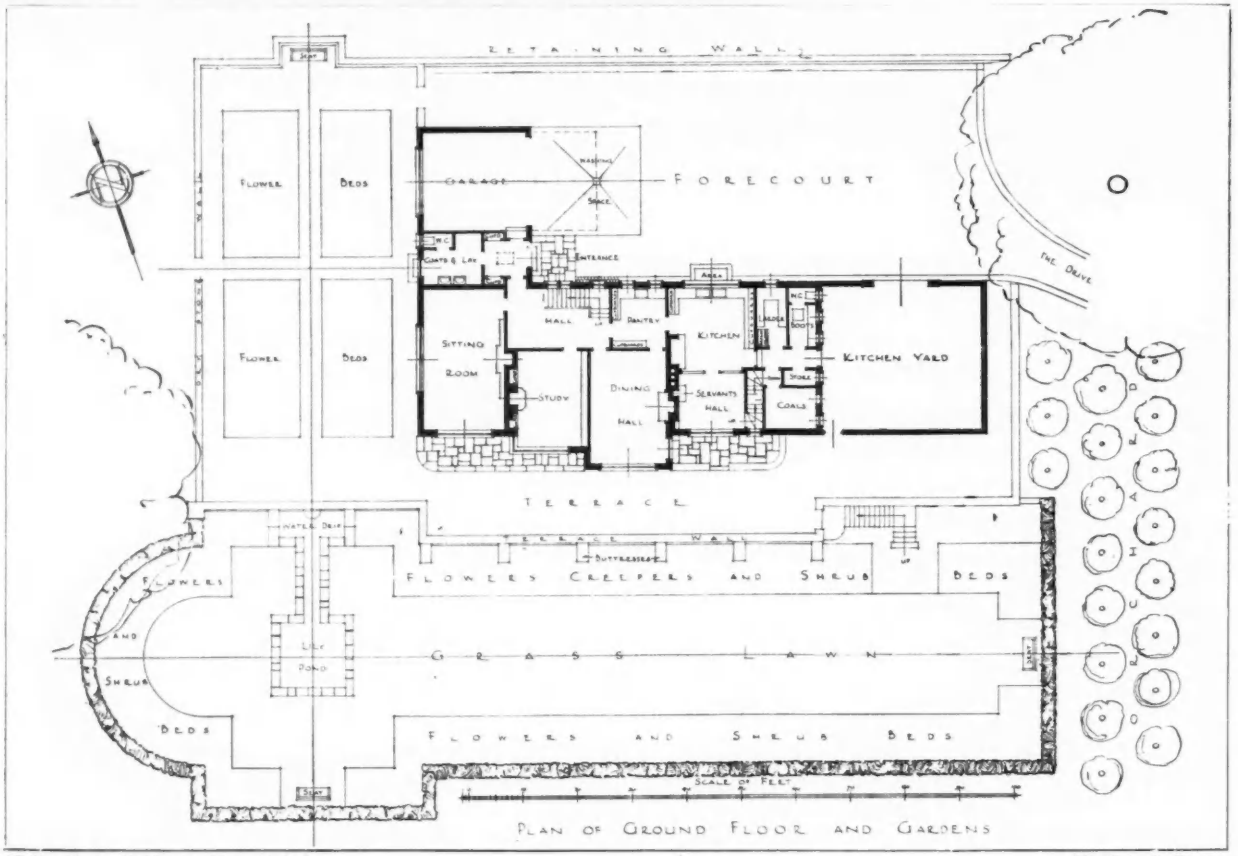
Full particulars of the examinations and application forms can be obtained from the Secretary of the R.I.B.A., 9 Conduit Street, W.1.



Looking along the garden front, with the lily pond in the foreground, towards the east. Steps at the farther end of the garden wall, which is of local stone, lead up to the terrace. (See layout plan below.)

FIRST FLOOR PLAN

The central feature of the first-floor plan is the owner's suite, comprising bedroom, dressing-room and bathroom, together with a glass-roofed balcony. This runs along the garden front, and can be seen in the adjoining photograph.

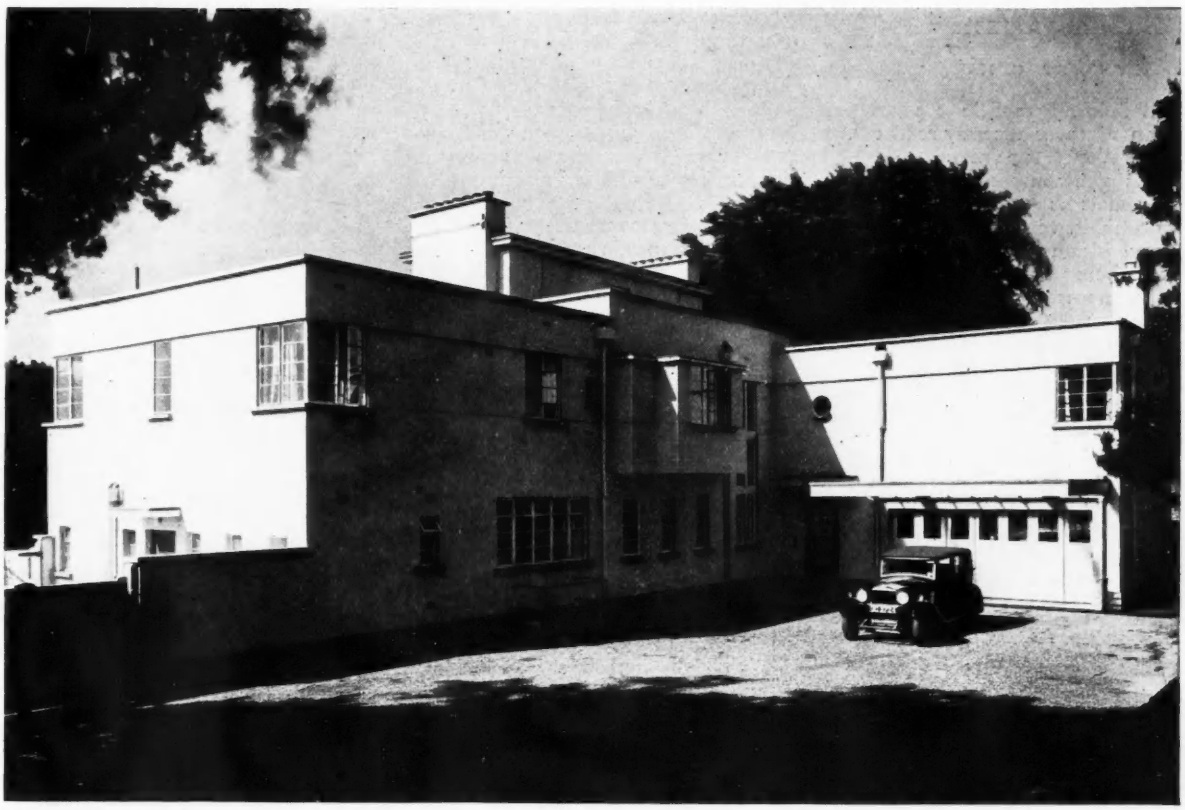


Kirkby House, Kirkby Overblow, Yorks.] [*By John C. Procter.*

The ground-floor plan and the layout of the gardens. The house is entered from a forecourt, partly dug into the hill on the north side. The entrance lobby, as will be seen, both connects and separates the staircase hall, garage, and cloakroom.

KIRKBY HOUSE, KIRKBY OVERBLOW, YORKSHIRE

DESIGNED BY JOHN C. PROCTER



The main entrance front, as seen from the east. The external walls are of cavity brickwork, covered with a slightly-textured stucco, finished a light buff colour. The low plinth is of local stone, and the roof is floored with asphalt. The garage is on the right of the entrance door, and the gateway on the left leads to the kitchen yard.

KIRKBY HOUSE, Kirkby, Yorkshire, illustrations and plans of which are reproduced on this and the facing page, is built on a site sloping steeply from north to south, overlooking a very beautiful stretch of Wharfedale, and towards the ruins of Harewood Castle across the valley.

The site is in the midst of park land, and is surrounded by many very fine trees, which dictated to some extent the placing of the house. The gardens had all to be made up, and in this respect there is still much to be done.

At the outset, the usual "Battle of the Styles" in its minor form was pleasantly fought, and, after a mild struggle, the Germanic prevailed over the locally-favoured Tudor and Queen Anne.

Light and sun were the principal requirements of the planning, and the house has been designed accordingly.

The fairly exposed site affected the planning in some measure, especially in regard to the sun room on the roof, which is buttressed by the two main stacks which take all but one of the flues in the house. This was made possible by the client's desire that all the principal rooms should have their fireplaces on the long walls, and that these should not be external walls.

On the ground floor the chief feature of the planning is that the house is entered from a forecourt partly dug into the hill on the north side, and that the entrance lobby both connects and separates the staircase hall, garage and cloakroom. Both on the ground and first floors the staff quarters are definitely cut off from the rest of the house.

The first-floor plan shows that the number of bathrooms have not been stinted for the size of the house, that the staff have separate small bedrooms, and that the staircase commits the "school" crime of crossing the hall window. The main interest on this floor, however, is the owner's suite, consisting of bedroom, dressing-room and bathroom, together with a spacious glass-roofed balcony, reached from a lobby between dressing-room and bathroom. The balcony cannot be overlooked, and this, together with the dining-room veranda below, are sheltered from the prevailing wind, and catch and amplify the sun.

On the roof, reached by an internal staircase, is the sun room, glazed from floor to ceiling on its south side, with folding doors on to the roof. Here also are placed the box and tank rooms.

Externally the walls are of cavity brickwork, covered with a slightly-textured stucco, finished a light buff. The house stands on a low plinth of local stone, and the terrace and garden walling are in the same material. The roof is covered with asphalt, laid on joists and boards.

At the time the photographs were taken, many of the windows were still lacking curtains, and this and other shortcomings made interior photographs impossible. As with the design of the exterior, the aim internally has been to eliminate "nonsense" as much as possible; as far as money would allow to use respectable materials; and not allow the "craftsman" to be too crafty, or to torture honest stuff by too much cutting and twisting.

A. B.

THE SPECIFICATION WRITER

Natural Rock Asphalt in Building Construction

BY COL. S. C. MARRIOTT

THE following article is condensed from a paper recently read to the Clerks of Works Association.

What is commonly known as natural rock asphalt is really natural rock mastic asphalt, a combination of natural rock and bitumen, so composed as to enable its being applied in a plastic state.

Briefly, natural rock asphalt is a limestone which in some prehistoric period has been impregnated with the oil vapours from the centre of the earth, and the actual amount of impregnation has depended upon the density of the limestone, the result being that some classes of rock are richer than others, but this does not necessarily mean that they are the better for it, because it indicates a softness in the limestone which is not conducive to good mastic asphalt. A percentage of from 6 to 8 per cent. has been found by experience to give the best results, as it facilitates regulation of the mastic by the addition of bitumen to bring the bitumen content up to 16 per cent. in order to make the mass into a plastic nature. By far the most important feature in the manufacture of mastic asphalt is the nature and origin of the added bitumen, owing to the fact that it has an important bearing upon the wearing and weathering qualities of the finished product.

There are two kinds of bitumen, one natural, and the other synthetic, and whilst there are many sources from which natural rock asphalt can be obtained, there is only one source from which natural bitumen is marketed—that is from Trinidad, a British island in the West Indies. I will not deal with the peculiar circumstances in which this unique material is found. Trinidad Lake bitumen has been endowed with certain qualities which cannot be reproduced by artificial methods, with the result that its use in connection with the production of mastic asphalt is specified by architects and engineers throughout the world. There are, however, synthetic bitumens—the residue of oil after the petrol and lubricating oils have been extracted, and whilst they may be termed pure bitumens, their consistency varies very considerably with the amount of distillation to which they have been subjected. On the other hand, the consistency of Trinidad Lake bitumen has never varied since the first analysis.

This peculiar stability in Trinidad bitumen therefore is of the greatest value in the manufacture of mastic asphalt, because if the natural rock aggregate contains 6 to 8 per cent. of naturally impregnated bitumen, and the percentage has to be brought up to 16 per cent. with added bitumen, this balance practically controls the situation and, knowing its consistency, the manufacturers are able to standardize the various grades of mastic asphalt produced.

We therefore come down to the fact that the best mastic asphalt is produced from natural rock asphalt and Trinidad Lake bitumen. The actual process of manufacture is as follows: The rock asphalt, having been reduced to powder, is fed into mechanically stirred boilers or cookers, together with sufficient bitumen or asphalt cement to bring the whole mass into a plastic state, when it is run off into ½ cwt. moulds ready for issue. This process will perhaps sound somewhat simple, but it is very much the reverse, owing to the numerous factors which operate against the manufacturer unless the greatest care is taken: the choice and grading of the rock itself, the characteristics of the added bitumen, its ductility, penetration, etc. These all vary according to the requirements of the grade of material being manufactured; there are something like fifty different standardized grades of mastic asphalt. Not the least important part of this process is the actual cooking in the boilers, after the mass has been properly mixed, and to all intents and purposes is ready to be run off. The whole process of preparation should take 6 to 8 hours.

There is still a further danger that the finished product may be spoilt in the reheating on the job. Care should be taken to avoid overheating, and frequent stirring is necessary to prevent the material from burning against the sides and bottoms of the pans.

It is only by taking every precaution and care in the manufacture at the works and preparation on the site of the contract that the mastic arrives at its final stage in the building in such a condition as to give its best service and longest service.

In application the best results are only obtainable when the architect, the builder and the asphalter co-operate.

In natural rock asphalt we have a material in which are combined more weather-resisting qualities than any other agent yet produced. It is used as a shield against the elements for the protection of the most vital points in building and engineering construction. The asphalt specialist should be consulted by the architect as to the best means of arriving at certain results.

In these days architects as a whole (although there are exceptions) seem apathetic in their attitude towards asphalt, and often unsympathetic towards those specialists whose long experience in the trade must be of value. Trinidad Lake asphalt, as a fluxing agent to rock asphalt, is frequently specified, but steps are rarely if ever taken to identify its presence in the asphalt blocks actually used on contracts. Investigation on the part of architects regarding this matter would be welcomed by the asphalt specialists, whose technical departments are always at their disposal whenever they wish to avail themselves of them.

Last, and by no means least, the finished work, especially in the "tanking" of basements, must be carefully protected against the thoughtless workman. To some people the strict Clerk of Works is a nuisance; to the asphalt contractor he is a blessing, because he knows that, in his absence from the job, he holds a watching brief for all exposed asphalt surfaces, in which a single fracture may cause many hundreds of pounds' worth of damage.

I propose to conclude this address by going straight to one or two of the latest developments in asphalt work, new applications which are mainly the result of research. I refer to the action of acids and oils. The former is, of course, of greater importance, but it is only possible to give a very general outline from the fact that hardly any two propositions are exactly alike.

The application of acid proof asphalt ranges from the flooring of accumulator rooms to that of glue houses, from sugar refineries to the lining of galvanizing tanks, and in each case different conditions of acid and temperature have to be countered. It is, therefore, impossible to have one standard material, and the most satisfactory method of dealing with this problem from the manufacturers' and the asphalters' point of view is to have several specifications, some of which cover propositions of medium severity and others are designed for work under the most stringent conditions.

Oil-proof asphalt, a recent invention, produced with the object of countering the conditions met with on garage floors, and oil-fuel ships' decks, is also available now, as is also coloured asphalt in red, green and brown shades. The latter material is not merely coloured on the surface, but combines permanent colouring, with all the wearing and waterproofing qualities of natural rock mastic asphalt.

Finally, Trinidad Lake asphalt is an all-Empire product.

RESEARCH into the mechanical properties of concrete is always in progress. For ten years such problems as its

susceptibility to corrosion and its behaviour under varying stresses and strains have been under investigation at the Karlsruhe Technical College. Using a carefully-adjusted composition of Portland cement, Rhine sand and gravel, it has been concluded that there exists a critical stress for concrete in compression and tension. Loadings below this stress strengthen the material and render it elastic. For this reason it is advisable to provide for a critical limit, as high as possible, in the case of structures subjected to high alternate stresses. This means a material of great strength and elasticity. In order to restrict the formation of the cracks as far as possible in structural parts subjected to bending moments, a reduction of the permanent and plastic compressive strains in the concrete is necessary. As the permanent strains include those caused by shrinkage, the age of the concrete plays an important part. After some time—about six months—the increase of these strains practically ceases and the moisture and the temperature of the air have a variable influence, but not as great a one as by shrinkage due to hardening during the first months. Thus it is necessary to counteract the strains due to hardening by keeping the structures wet as long as possible. The most essential result is that alternating loadings below the critical strains and stresses do not influence the load of rupture. Finally, the investigations have shown that in reinforced concrete beams subjected to bending moments the cracks breathe—i.e. they open by the loading and practically close by unloading—as long as the reinforcement is not stressed beyond the elastic limit of the steel. The knowledge obtained as the result of the investigations was given in detail in a paper read at the Institution of Structural Engineers by Dr. E. Probst, of the College, last week.

PUBLIC BUILDINGS COMPETITION, NORTHAMPTON

WINNING DESIGN: BY J. C. PRESTWICH AND SONS

ON this and the following two pages are illustrated the first premiated designs in the competition for the proposed public baths, police and fire stations, sessions court, etc., to be erected in Campbell Street and Upper Mounts, Northampton. The approximate cost of the scheme is £250,000. The assessor, Mr. Percy Thomas, O.B.E., F.R.I.B.A., made his award as follows :

First premium (£500) : Messrs. J. C. Prestwich and Sons, F. & LL.R.I.B.A., of Leigh, Lancs.

Second premium (£400) : Mr. H. J. Harding, A.R.I.B.A., of 46 Beauchamp Place, London.

Third premium (£300) : Messrs. Tolson and King, A.R.I.B.A., of 4 Hessle Mount, Leeds.

Fourth premium (£200) : Mr. E. P. Musman, A.R.I.B.A., of 7 Carteret Street, Westminster, London.

As will be seen from the ground-floor plan reproduced on page 505, the main entrances to the courts, fire station and baths are on the main front to Upper Mounts. The large bath has been specially designed for use as a public hall, therefore a separate entrance has been provided, set back about ten feet from the main building line, in order to allow for the arrival and departure of cars.

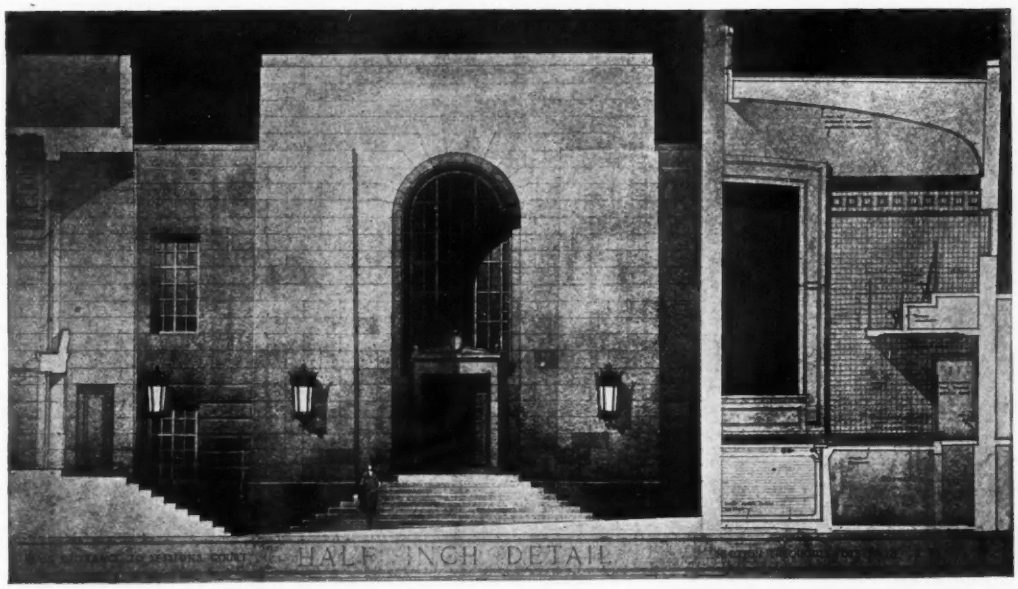
The baths building, one of the principal features of the scheme, contains, in addition to the large bath or public hall a smaller bath with a flat roof, for the purpose of sun-bathing, with direct access to both baths. This facility for sun bathers was requested in the conditions. The usual subsidiary slipper baths, etc., are planned at the rear of the building. The first floor is devoted to the superintendent's quarters and a committee room.

The fire station is situated between the courts and baths buildings. The engine space, running up through the mezzanine floor, has a maximum accommodation for five engines. The four upper floors are devoted to the firemen's quarters.

The police buildings and courts, on the left of the fire station, are planned on two floors.

A house for the chief constable has been placed on the south-western corner of the site, with its main front to Upper Mounts.

The designs are on exhibition in the Town Hall, Northampton, until Thursday, October 15.

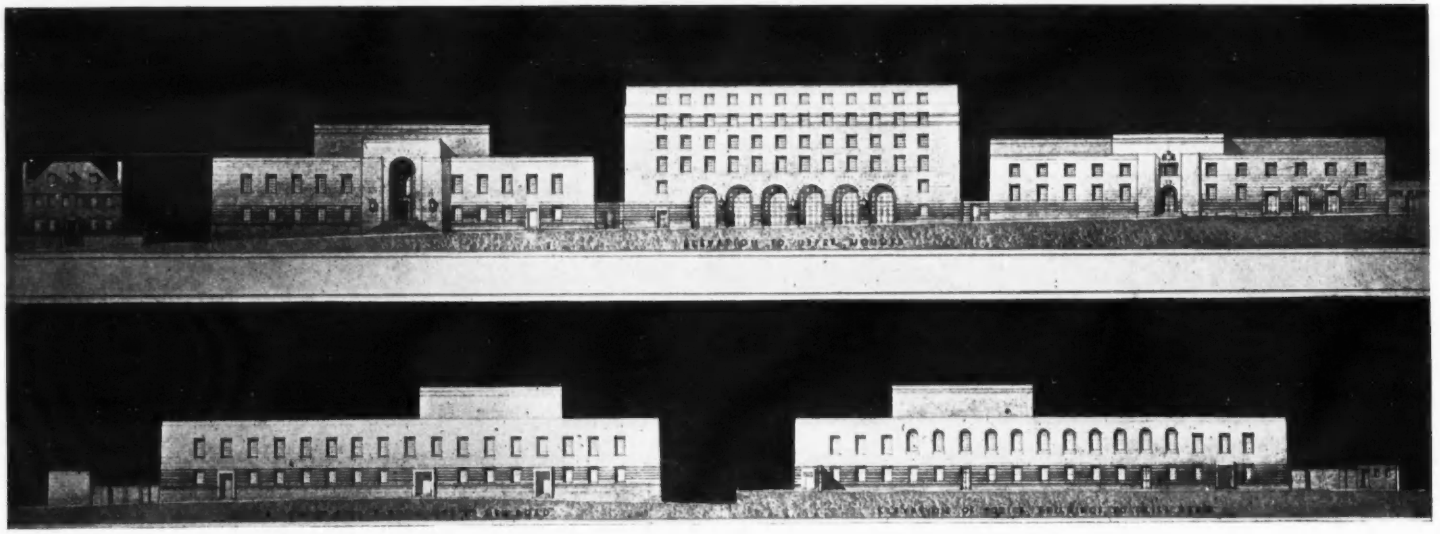


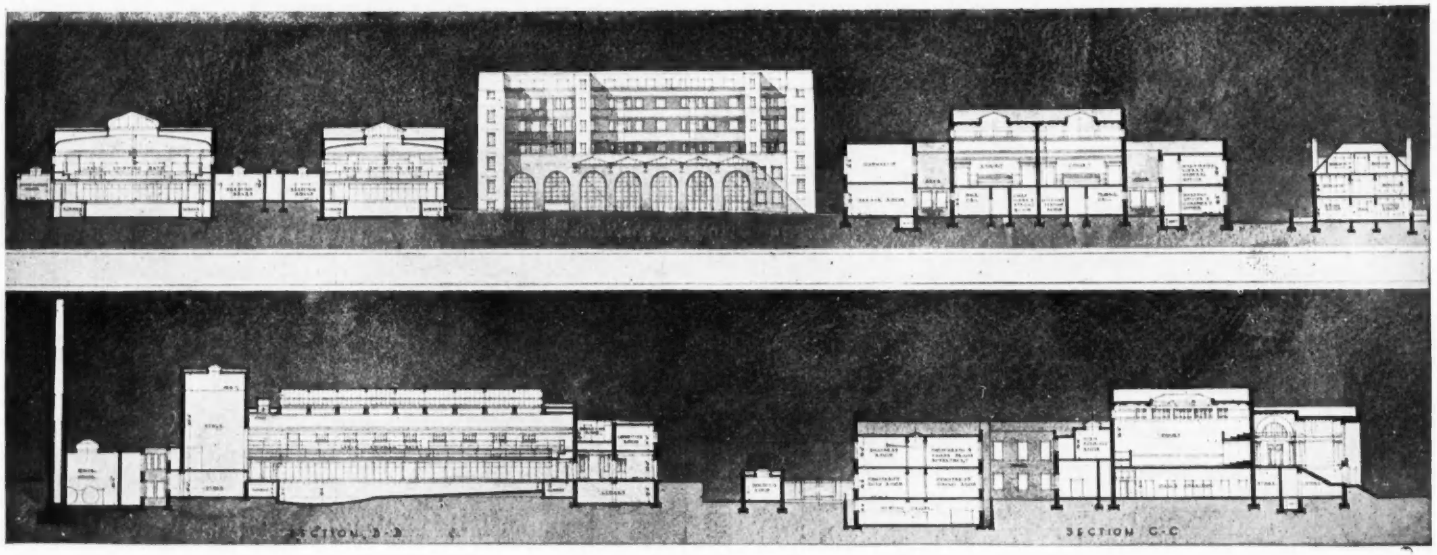
The architects' half-inch detail drawing of the main entrance to the sessions court on the front to Upper Mounts; and a section through the large bath.

Public Buildings Competition, Northampton

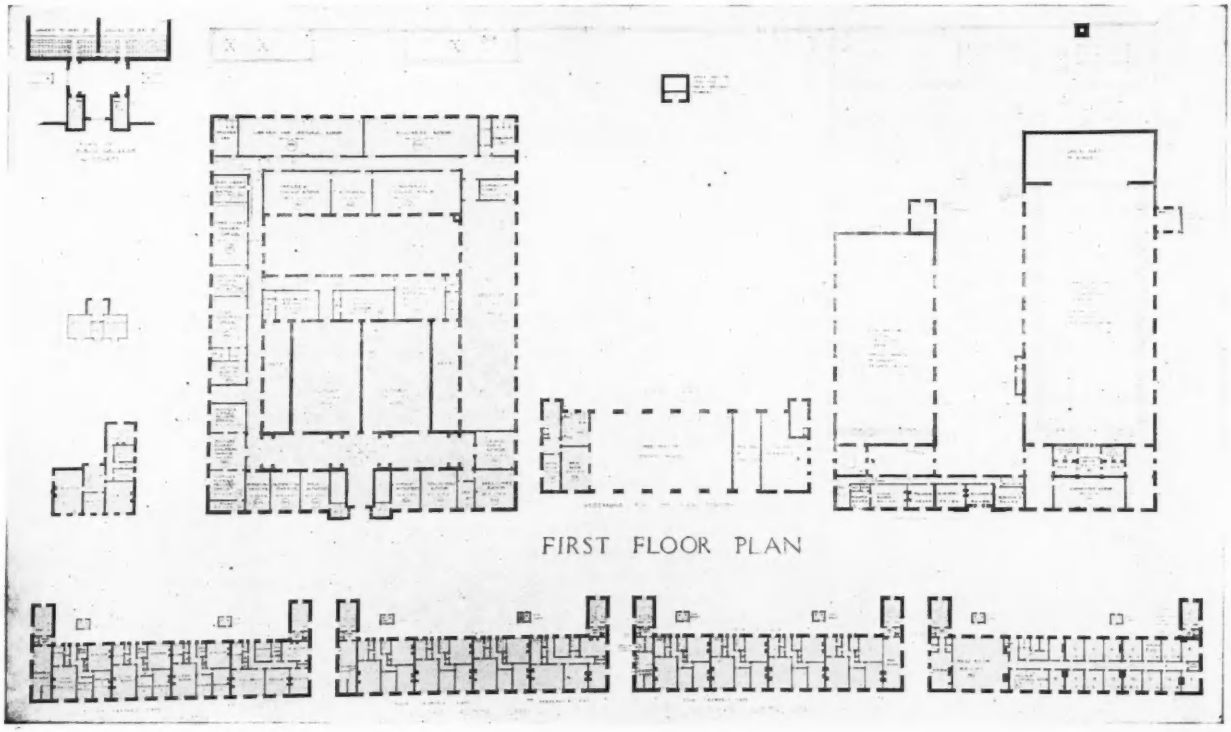
By J. C. Prestwich and Sons

Elevations of the buildings facing Upper Mounts, New Road and Drill Yard. In the conditions of the competition it was stated that "the general character of the buildings should rely for effect upon good proportion and grouping rather than upon elaborate detail." Portland stone is to be used for facings.



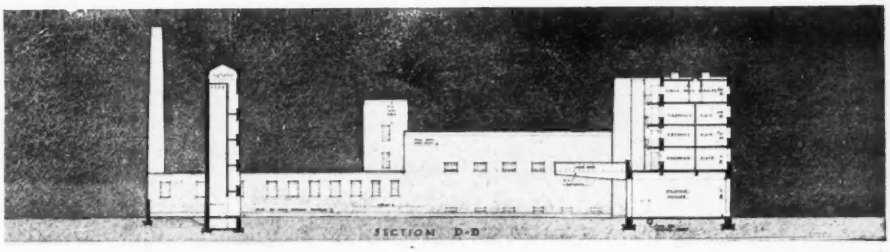


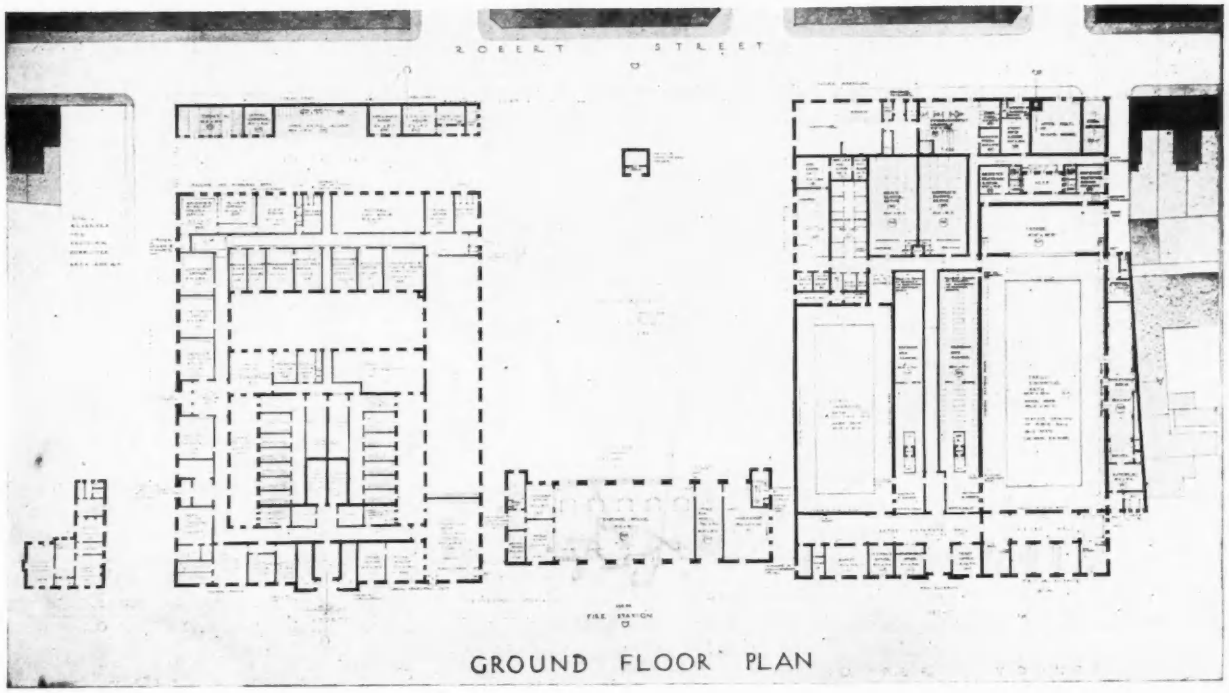
Sections A–A, B–B, and C–C; the fourth—D–D—is reproduced on the facing page. As will be seen on the section A–A, the smaller of the two swimming baths has a flat roof; this has been so designed for the purpose of sun-bathing, thus complying with one of the clauses in the conditions. Farther along are shown the fire station, the upper stories of which are devoted to the firemen's quarters; the police buildings and courts, with the two principal courts on the first floor; and the house for the Chief Constable.



Public Buildings Competition, Northampton: Winning Design.] [*By J. C. Prestwich and Sons.*

Ground and first-floor plans of the courts and baths buildings, the house for the Chief Constable, and the ground, mezzanine four upper floors; and section D–D of the fire station.





LITERATURE

EGYPTIAN SCULPTURE

THE modern sculptor says there is no such thing as static sculpture; for sculpture to be expressive it must indicate a moment of suspended dynamism. This is a very different thing from the expression of violent emotion in violent representational action. Between the two, however, there is only the matter of degree. All actualistic sculpture exhibits this degree; while abstract work is necessarily static.

So the demand of the modern sculptor for the non-static principle requires to be classified according to exemplary models furnished by the past plastic and glyptic schools. All schools of sculpture provide the extremes of vivid movement and perfect peace. The war and hunting scenes of the Assyrian reliefs provide that extreme dynamism which of necessity is the requirement of pictorial art. The portraits of the kings, queens, and priests of Egypt provide the extreme of quietism which we have usually denoted as static.

It is in this remarkable quietism of Egyptian sculpture, of carving especially, that the great excellence of it is possessed. It has virtues of material and technique; of portraiture, of history; but its great virtue is its sublime stillness. This may well be compared with the solitude of the desert in which some of it is found; just as the horizontality of Egyptian architecture may well be compared with the contour of the geological formation of the country. The two principles not only coalesce, they combine, for Egyptian sculpture is but a factor in Egyptian architecture.

If there is no static of form, however, there is in Egyptian sculpture an overwhelming static of history. However the form may be described, it has been the possession of the art from inception even to decay; a more overwhelming display of consistency than even the Greek affords. There are few elements, but they are paramount as well as unchanging and persistent. There were six great schools of Egyptian sculpture, but the minimum of development. The first dynasty produced the composite wood statue; the Old Kingdom added metal to this and produced the whole statue in stone; the Middle Kingdom maintained these things and it was not until the New Kingdom that some variation was achieved in the composite stone statue and the colossal figure began to dominate the art. Figure and relief offered themselves as architectural elements; the Old and Middle works affording examples in relief of scenes from daily life and funerary ceremonies; the New, the reliefs of the decorated temples and tombs.

Of all these things Miss Murray, the Assistant Professor of Egyptology in the University of London, gives an admirable account, to which are added detailed descriptions of many particular works and most useful sections on methods and materials.

There are 120 excellent illustrations in the volume. KINETON PARKES

Egyptian Sculpture. By Margaret A. Murray. London : Duckworth. Price 15s. net.

MONUMENTAL ARCHITECTURE

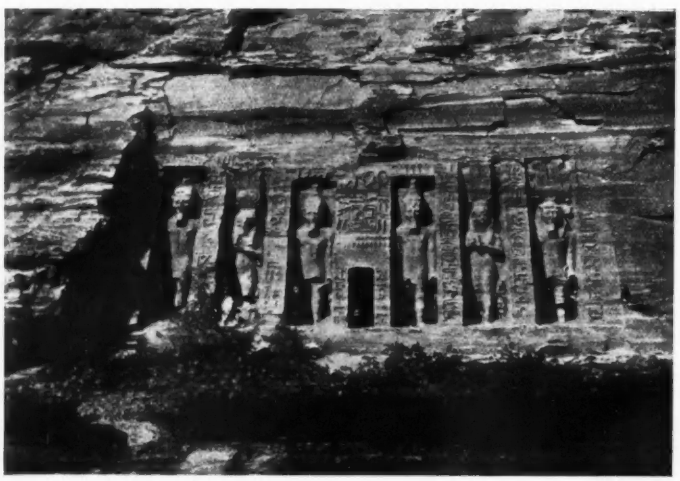
IT is necessary to say at once that this book is not so much a critical selection as a record of monumental and commercial architecture carried on from one volume to another and dealing in detail with different types. In this particular volume are included theatres, scholastic and commercial buildings; but in the main it is a record of modern bank architecture.

The production is excellent. Large photographs, clear plans, and a well-written introduction to the study of bank-planning by Mr. Grahame B. Tubbs, with good paper and modest black binding, make it in every way a book for the library.

Bank architecture in England is interesting within a well-defined and rather narrow ambit. The habit of banking has grown among the people gradually and without serious check. It has grown to enormous dimensions, and by a series of amalgamations nearly the entire banking business of the country has become concentrated in five great banks. These five banks carry on a gentlemanly war, vieing one with another in the erection of little branch banks wherever there is business to be had.

Generally speaking, the directors of the great banks saw very clearly in what their programme was to consist, and when they followed the doctor in choosing a seemly Georgian address it must be admitted that they gauged their public well : the English branch bank gives the impression of friendly security, and banking has become a pleasant habit. Nor can anybody really seriously complain that the banks have failed in their architectural duty, for in every country town you will find them upholding the amenities and taking their modest place, securely wedged into the direct line of gentlemanly tradition.

Even more particularly speaking, the banks cannot be accused of architectural reaction in a world of adventure. They are not, in fact, any worse than their neighbours the insurance companies, than the kings of commerce or than most of the great builders of today. The point at issue rests upon the fact that they have been responsible for an enormous amount of building all over the country, and upon a very grand scale in London. Yet there is no rush of foreigners to England, eager to see how we have solved the problems that must have confronted the directors and their architects. There is hardly one of these buildings, great or small, that offer themselves as models for future development. The chance must have been offered by more than one architect to evoke some fresher and directer expression of banking, but policy seems always to have dictated that no risks must be taken; and so one may walk through the City of London seeing a quantity of stone but little originality, and less of genuine architectural emotion. If proof be needed of this, stand on the steps of the Exchange; look carefully at the detail on Soane's



The small temple at Abu Simbel, Egypt.

[*From* Egyptian Sculpture.]

screen wall of the Bank of England; then let your eye wander over the façades of five great new buildings, the contribution of our day. James Millar's Union Bank of Scotland should be excepted from this criticism. It is founded on a bank of McKim's that made history, and the whole thing so greatly performs its function, and is so finely modulated in all its parts, that one regrets that we have borrowed so little from the best that America could offer.

With the branch banks we have often cause for congratulation, for at times they strike the English note clearly and with charm, as in the examples by E. B. Maufe, Louis de Soissons and more than one of F. C. R. Palmer's branches for the National Provincial Bank.

Attention must be drawn again to the treatise on planning, for although it is confessedly an introduction to the subject, read with the plans and photographs, it will be found to contain a great deal of useful information.

E. M. F.

The Monumental and Commercial Architecture of Great Britain of the Present Day. Vol. ii. By Dexter Morand. London: John Tiranti & Co. Price 20s. net.

KELLY'S DIRECTORY

KELLY'S Directory of the Building Trades, 1931, just issued, reaches its eighteenth year of publication. Like its predecessors, it covers every trade and profession connected with architecture and building throughout England, Scotland and Wales. In addition to the names of upwards of twenty thousand builders, it also includes an extensive section giving, in alphabetical order, a list—considerably revised and extended—of branded articles and specialities used in the building trades, together with the names and addresses of the manufacturers: a list that should be of great assistance to those who wish to trace the manufacturers of building material bearing a distinctive trade mark or name.

Every year the *Directory* seems to grow a little more bulky. In this edition there are no fewer than 3,120 pages (excluding those devoted to proprietary articles and trade names). The tasks of revision and correction must have been as arduous as ever, but nevertheless, these have been done with extreme thoroughness.

Kelly's Directory of the Building Trades, 1931. London: Kelly's Directories, Ltd. Price £2 10s. net.

SOUTH YORKS ARCHITECTS' ANNUAL REPORT

THE forty-third *Annual Report of the Sheffield, South Yorkshire and District Society of Architects and Surveyors for the Year 1930–31* has recently been issued. In the Council's report it is stated that during the year the Director of Education was approached and a suggestion made to him that some proportion of the new school work should be entrusted to private architects, but without result. The Council feel it is unfortunate that in a city of the size of Sheffield the opportunities of architects in practice to design and erect public buildings should be more limited than in any other city of equal size. Other business dealt with by the Council includes the formation of a Peak District Panel of Architects, set up for the specific purpose of preventing, as far as may be in their power, the spoliation of the countryside, by giving free advice on designs and general layout schemes where required; questions relating to the formation of a Lincolnshire Society of Architects; designing of buildings by draughtsmen employed by builders and limited liability companies; West Riding Education scholarships; housing work panels; maintenance scholarships; professional affixes; and a City aerodrome.

The membership of the Society now totals 152, comprising 10 Honorary Members; 64 Fellows; 63 Associates, 11 students; and 4 lay members, showing an increase of fourteen over that for the previous year.

A portrait of Mr. W. G. Buck, F.R.I.B.A., the president, has been reproduced as the frontispiece.

Annual Report of the Sheffield, South Yorkshire, and District Society of Architects and Surveyors for 1930–31.

QUESTIONS THAT ARISE

Lavatory Basins

J. S. B. writes: "*I should be glad to know if your expert can suggest a method of dealing with the waste water from two or more lavatory basins, which it is proposed to instal in a basement, and where the outlet from the basins will be approximately 2 ft. below the level of the drain.*

"*The drain, which is a 6-in. cast-iron pipe, passes along the wall of the basement in which it is proposed to instal the basins. I have noted in* THE ARCHITECTS' JOURNAL *advertisements of cellar and sump drainers, and I have written for full particulars, but I should be glad of any further suggestions your expert might be able to offer.*"

Presumably it is found impossible to raise the basins, with a portion of basement floor, so that their outlets could be introduced to the drain without mechanical aid. If this could be done, and the inlet gulley were of an anti-backflow type, with collecting catchpit sufficient to act as a temporary reservoir should pressure within the drain have closed the valve, the arrangement should work. Without the anti-flooding valve, the drain inlet might be forced by a heavy discharge from higher points connected to the main drain, or should it become (even temporarily) choked.

Failing some such expedient, one of the mechanical devices designed to raise sewage appears to be the only recourse, and will be a relatively expensive luxury to deal with so minor a convenience. It is sometimes found possible to use a Blake's "B" type ram for raising sewage effluent from a depth not more than 8 or 10 ft. below the level of the ram, which itself may be operated from an ordinary open cistern fed off a main supply, but the ram itself passes a bulk of operating water so greatly in excess of the water actually raised that it does not seem likely in this case to afford a reasonable alternative. E. G.

Walls and Flooring

E. N. writes: "*I should be glad if your expert would advise me as to the most suitable materials to use for the floor and walls of a modern operating theatre. The existing theatre floor has cracked badly. The walls are plastered and enamelled over, but are not even. I am about to reconstruct the theatre and would much appreciate your expert's advice. The floors of the hospital are counter floored with maple, which is badly worn, and the authorities propose flooring throughout. Your expert's advice as to the material best suited for this purpose would also be appreciated.*"

The most suitable material for the floors and walls of an operating theatre is Biancola or other similar material (each firm has its own special name for this). The floor should be divided up into squares with a brass or ebonite strip as a precaution against cracking. Alternatively, the floors and walls can be tiled, as is usually done in American hospitals. The colour favoured by the surgeons is a pale grey or pale green. Rubber has been used for the floors and walls of an operating theatre, but it is not so satisfactory as the two other materials mentioned. The best floor for hospital wards is undoubtedly teak or Bagac. The corridors should have a noiseless flooring material, such as Korkoid, Ruboleum or rubber tiles, with a margin and cove skirting of terrazzo or teak. If funds are insufficient to cover these materials, Battleship linoleum has been found to be satisfactory. We cannot gather from the query as to whether the floors and walls of the operating theatre in question are to be reconstructed. This is surely necessary if the job is to be satisfactory, and they should be of fireproof material. L. G. P.

R.I.B.A. FINAL EXAMINATION

Alternative Problems in Design

FOLLOWING is a list of R.I.B.A. problems in design for the year ending December 31, 1932. Additional copies of the list may be obtained on application at the R.I.B.A.:

1 : The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W.1, on or before the dates specified below.

2 : Each set of drawings must be signed in ink by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3 : All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work, and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4 : Drawings for subjects *a* are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects *b* are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly and unaffected character.

5 : After a design has been approved, it may be re-submitted, together with the specified working drawings, on any of the dates for submission of drawings given below.

6 : All candidates taking the Final Examination in 1932 and subsequent years will be required to include in the four Testimonies of Study, for which they must secure approval before being admitted to the Examination, at least one of the problems involving an acoustical treatment. Where a reverberation table is asked for, it should be as complete as possible and the reverberation formula should be quoted. Acoustic diagrams showing the reflection of sound beams should be to a scale of one-eighth of an inch to a foot. The two subjects set for 1932 which may be treated acoustically are Problems Nos. CXXIV and CXXVII. A list of articles and books on the subject to guide candidates in obtaining the necessary information may be obtained free on application to the Secretary, R.I.B.A.

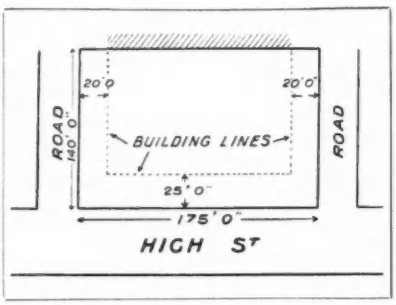
CXXIII : *a : A Motor Coach Inn :* The requirements of such an inn are as follows : Parking space for six charabancs and ten cars, small garage and repair shop, filling station, all to have convenient access and circulation from the main road.

The inn itself must have a small private bar and public bar, and a large restaurant and tea-room to seat 120 persons. The restaurant should overlook a garden. Ample service accommodation should be given for the provision of light meals. Cloak and lavatory accommodation. The manager's apartments will consist of small office, living-room, kitchen, etc., six bedrooms, some of which may be in the roof. It should be borne in mind that in the winter the motor traffic is greatly reduced and the restaurant will be closed for several months. The site is a large field along the road, and as much land as necessary may be used.

Drawings required : One-sixteenth scale block plan. Plans of all floors, sections and elevations, one-eighth scale. Half-inch detail of a portion of the main front.

Working Drawings : The design for a Motor Coach Inn may, after it has been approved, be re-submitted with the addition of one-eighth inch scale plans showing construction, and the roof truss in restaurant drawn to half-inch scale.

CXXIV : In accordance with instruction to candidates No. 6 (above), this problem may be treated acoustically. *a : A Small Town Hall in a Country Town :* The site is rectangular, with a frontage of 175 ft. to the High Street, and a depth of 140 ft. There are no rights of lights on the back boundary.



Accommodation : The following rooms are required of approximately the size indicated. All measurements are in sq. ft. (A) *Council Suite :* (1) Council chamber, 1,100 sq. ft.; (2) committee room No. 1, 600; (3) committee room No. 2, 400; (4) mayor's parlour with lavatory, 300; (5) members' room (male), 300; (6) members' room (female), 150; (7) waiting room, 150; (8) members' lavatory (male); (9) members' lavatory (female). (B) *Town Clerk's Department :* (1) Town clerk's room, 300 sq ft.; (2) assistant town clerk's room, 200; (3) general office, 400; (4) conveyancing room, 200; (5) typists, 200; (6) spare, 150. (C) *Medical Officer of Health :* (1) Medical officer of health private, 300 sq. ft.; (2) assistant medical officer of health, 200; (3) general office, 300; (4) sanitary inspectors, 200; (5) health visitors, 250; (6) typists, 150; (7) spare, 150. (D) *Education Department :* (1) Education general office, 250 sq. ft.; (2) education secretary, 150. (E) *Accountant's Department :* (1) Accountant's private, 300 sq. ft.; (2) general office, 450; (3) rates office, 500; (4) internal audit, 200; (5) costing clerk, 150; (6) typists, 150; (7) spare, 150. (F) *Surveyor's Department :* (1) Surveyor's private, 300 sq. ft.; (2) assistant surveyor, 200; (3) general office, 400; (4) drawing office, 400; (5) building inspector, 200; (6) plan room, 100; (7) typist 150; (8) spare, 150. (G) *Weights and Measures :* (1) Two rooms, each 200 sq. ft. (H) *Caretaker :* Living-room, scullery, larder, store, bath, w.c. and two bedrooms. (I) *Miscellaneous :* (1) Two strong-rooms, 100 sq. ft. each, for each of departments B, E and F. One should be in the basement and one adjacent to the department; (2) boiler house and fuel store; (3) male and female staff lavatories; (4) telephone room; (5) inquiry office near main entrance.

The Council suite should be on the first floor. The Town Clerk's department should be adjoining. The Accountant's department should be on the ground floor, with the rates office easily accessible by the public.

The acoustics of the council chamber should be carefully considered.

Drawings required : Plan of each floor, three elevations, and two sections, all one-sixteenth scale; portion of front elevation, half-inch scale; and reverberation table for council chamber.

b : Working Drawings : The design for a small town hall may, after it has been approved, be re-submitted with the addition of complete working drawings of the council chamber to half-inch scale, together with a sheet of full-size details.

CXXV. : *a : An Archway Connecting two Thoroughfares :* A railway, carried upon semicircular arched brick construction, passes through the business quarters of a town, and arrangements have been made whereby one of the archways is to be used to connect two existing thoroughfares, which run parallel with the railway.

The archway is 60 ft. deep from end to end, 60 ft. wide, and 45 ft. high from the ground to the soffit of the semicircle at the crown.

A public right of way for foot passengers, 20 ft. wide, has been granted by the Railway Company, down the centre of the archway, of a minimum height of 20 ft., which may be increased at the discretion of the designer. The Railway Company propose to utilize the remaining space for use as shops, workshops, etc.

It is considered desirable that the new structure —the skeleton of which is to be of steel—should be as independent as possible from the existing brickwork on account of vibration, and no rights of support for the steel construction upon their brickwork is granted by the Railway Company.

Particular attention must be given to lighting and ventilation.

The Railway Company are exempt from the requirements of the local bylaws.

Drawings required : Plans of floors; longitudinal and cross sections; elevation of one end of the arched opening towards the existing thoroughfare to one-eighth inch scale. Detail of the main entrance arch and one shop bay to half-inch scale.

b : Working Drawings : The design for an archway connecting two thoroughfares may, after it has been approved, be re-submitted with the addition of working drawings consisting of complete half-inch details of one of the shops, which is to be designed for the sale of boots and shoes, together with a sheet of full-size details.

CXXVI : *a : A Design for a Housing Scheme :* An industrial firm proposes to erect a number of houses for skilled workmen on the outskirts of a small town. The building site is rectangular; the north and south boundaries each measure 600 ft.—the east and west boundaries each 475 ft.; the ground falls 8 ft. at an even gradient from north to south, and is bounded by secondary roads of which that on the south is the most important. A recreation ground is provided by the firm elsewhere. The following housing accommodation is to be provided : i : Twelve houses of parlour type with three bedrooms and a floor area not exceeding 920 ft. super; ii : Fifty-two houses of non-parlour type with three bedrooms and a floor area not exceeding 820 ft. super; iii : Four houses of non-parlour type with two bedrooms.

Drawings required : Layout plan to one five-hundredth scale, showing buildings, roads, paths, gardens, etc.

One-sixteenth inch scale plans, elevations and sections, sufficient to show each type of house and method of grouping.

b : Working Drawings : The design for a housing scheme may, after it has been approved, be re-submitted with the addition of : i : Complete working drawings to half-inch scale, showing plans of each floor, section and elevations of one parlour-type cottage; ii : Half-inch scale section through roadway, showing method of construction; iii : Drainage plan of complete site to one five-hundredth scale, showing direction and size of drains on the "combined" system. (NOTE.—It may be assumed that a main sewer exists in all the roads surrounding the site.)

CXXVII.—In accordance with Instruction to Candidates No. 6 (above), this problem may be treated acoustically. *a : A Theatre Club :* A society having as its main function the production of experimental plays, proposes to build its own premises. The accommodation required is as follows :

Miniature theatre to seat 350 persons, 50 of which should be in a gallery. A small but complete stage is to be provided with at least four dressing-rooms and lavatory accommodation, etc. The entrance to the theatre is through a large lounge hall with booking and inquiry office, which also gives access to the club portion of the premises. The club rooms are to be : Sitting-room, card-room, writing-room, restaurant,

bar, and also a bar in connection with the theatre. Kitchens, servants' quarters (no bedrooms), room for night watchman, general and private office. Cloakrooms for theatre and separate cloaks for the club must be provided. (NOTE.—As this theatre is not for public performances some of the rooms may be placed above the auditorium.) *Site :* 40 ft. by 150 ft. Roads at front and back on the narrow frontages. Party walls at the sides from which no light can be obtained.

Drawings required : Plans, two sections and front elevation to one-eighth scale. Half-inch detail of proscenium arch. An acoustic diagram showing propagation of sound from stage on long section is required.

b : Working Drawings : The design for a Theatre Club may, after it has been approved, be re-submitted with the addition of complete working drawings of the auditorium and stage to half-inch scale.

CXXVIII.—*a : A Maternity and Child Welfare Clinic : Site :* The site is level and rectangular, with a frontage to a roadway on the east side measuring 160 ft., and is 130 ft. deep. The building line is 30 ft. from the boundary.

Accommodation : The following is the accommodation required with approximate areas. All measurements are in sq. ft. (1) Waiting hall, 1,000 sq. ft.; (2) doctor's consulting room, 180; (3) operating theatre, 200; (4) recovery ward (adjoining No. 3), 330; (5) dental theatre, 180; (6) X-ray room, 150; (7) orthopædic room, 150; (8) minor ailments room, 120; (9) dark room (adjoining No. 8), 25; (10) sale of food room, 100; (11) weighing room, 150; (12) nurses' room, 150; (13) laboratory, 100; (14) office, 150; (15) one w.c. and lavatory basin for each of the following : male patients, female patients, male staff, female staff; one w.c., bath and basin opening off the recovery ward and the dental theatre; (16) pram shelters for sixty perambulators; (17) heating chamber and fuel store.

Requirements : Good lighting and ventilation. Ease of supervision. No. 11 above should communicate directly with No. 2, and Nos. 8 and 10 should be close to these. Patients should be able to leave the building from this group of rooms, and also Nos. 3 and 5, without returning to the Waiting Hall. The building should be of a single story.

Drawings required : Plan of ground floor to one-eighth inch scale; two elevations to one-eighth inch scale; two sections to one-eighth inch scale ; and detail of main elevation to half-inch scale.

b : Working Drawings : The design for a Maternity and Child Welfare Clinic may, after it has been approved, be re-submitted with the addition of working drawings consisting of complete internal details to half-inch scale, together with a sheet of full-size details.

Dates for the Submission of Designs in 1932 :
Subject CXXIII, February 29; Subject CXXIV, April 29; Subject CXXV, June 30; Subject CXXVI, August 31; Subject CXXVII, October 31; Subject CXXVIII, December 30.

SOCIETIES AND INSTITUTIONS

ARCHITECTURE—WHAT'S THE USE ?

MR. CLOUGH WILLIAMS - ELLIS, F.R.I.B.A., in the course of his lecture on the above subject, the first of the R.I.B.A. series of popular lectures on architecture, given at the Institute on Saturday last, said he thought that at the present moment there was no question but that Sweden led the world in architecture. She had taken great trouble about the background of the lives of its people, both in the towns and cities and in their own homes, and the beneficent results were obvious. The same care for form and design, order and discipline, permeated her manufactures, which was at least one of the reasons for her great success in industry.

In Germany, too, architecture had long ceased to be the plaything of rich individuals or commercial concerns, but was made to work full-time everywhere for everybody. It had been democratised. The great architects and town-planners of Germany were competed for between localities, like their expert town managers or burgomasters, and as in England, Chelsea competed against Bolton for a football forward ! They had got the idea into their heads that fully civilised living was only possible (or at any rate much easier), if you had an orderly, efficiently arranged and gracious setting for it, both publicly in civic town-planning and privately in the intimate surroundings of their homes. It was indeed a strange and disastrous anomaly that, whereas there were at this moment a vastly greater number of really competent architects in Great Britain than ever before in its history —mostly young—there was never, probably in any country, such an overwhelming spate of men and petty building as had poured over the land within the last decade.

Somehow, and to their mutual loss, the architects and the general public had failed to get through to one another. No doubt it was partly the fault of the architects themselves, who had been, perhaps, too intent on the larger fish to take adequate trouble over the requirements of the smaller fry, or to attend to their education so that those requirements should include " right building "—which was architecture.

From whatever cause, we had the melancholy spectacle of a land in which architecture seemed to be reserved for a minute minority, for the cultivated rich and for big business, and where the great mass of everyday building was allowed to go hang, so that any foreigner landing, say, at Brighton and motoring to London, or at Liverpool and proceeding to Manchester, might well conclude that even such elementary qualities as good proportions, pleasant texture, harmonious colouring and general seemliness, were forbidden by statute to anyone below the rank of a super-taxpayer and to any building less important than the branch of a joint-stock bank.

He would find vast new suburbs to confirm this theory, in which, amidst a welter of unrelieved incompetence, both in its general layout and its individual houses, a gracious neo-Georgian bank and a dignified new post office or telephone exchange would proclaim that the English could still build beautifully when they chose, that English architecture was not dead but merely paralysed from the waist downwards, and, however vigorous the head and trunk, such a condition was scarcely one of health.

But, the lecturer asked, could we climb up out of our present darkness into the sunlight of civic and architectural good sense ? He thought not, unless we submitted to being kicked or pulled up by authority, and there was no authority worth the name, no effective discipline, no implication even that, as individuals or as a nation, we had any obligation whatever towards the national estate—an entailed estate of which we were merely the life tenants.

Already our hugger-mugger carelessness had seriously depreciated the value of our property, or, at any rate, gravely prejudiced its future value, whilst in the tangled growths that we were allowing to spring up around our already congested towns we were bequeathing a problem to our unhappy heirs that might well prove insoluble without invasion or an earthquake to help them.

Yet we were not without our gleams of civic sense and, given conspicuous opportunities for doing the handsome thing, now exploited it with more competence and dignity than for a century past. But merely being impressively monumental in the market-place was not good enough : we demanded today that some seemliness, some delight, and dignity even, should be brought into the byways and the common streets.

Or rather, we do not, he concluded, demand it, because the common English citizen, cradled in ugliness, still accepted squalor as normal. How convenient that used to seem—how disastrous in reality !

THE BUILDING OF A HOUSE

" The Building of a House " was the title of a lecture by Mr. E. R. Jarrett, A.R.I.B.A., at the Architectural Association on Saturday last. This was the first of the A.A.'s series of non-technical lectures.

We were living in an age of speed, rapid change and development such as the world had never before seen, said Mr. Jarrett. We must advance—we could not stand still. Standing still was as dangerous as going back along a one-way street. Our forefathers had time for ponderous dinner parties. We had not the time in these days, so we therefore invited our friends to cocktail parties. Though not less expensive, they caused less inconvenience to the domestic staff. With the change in entertainment we had to change our surroundings. The

oppressive background to the heavy meals of past days would strangle a cocktail party at birth, so architects designed surroundings in a lighter key more in keeping with the more cheerful function. They adapted their surroundings to the new requirements of our programme. As the people's views altered in regard to a way of living, so architects modified the houses we lived in.

This speed necessarily made a lot of our work transitory and experimental. We could not say that we had arrived at any conclusion or style, but we were stripping off the extraneous and unessential and there were clear indications that an architecture was being evolved which was in line with present-day conditions.

The hardest-worked word of the moment was economy, and in this connection the post-war work on the Continent might well be studied. Some of the most striking and imaginative architectural efforts had been achieved by German and Austrian architects in works of public utility, and particularly in homes for the people. These nations had to cut expenditure to the last halfpenny, mouldings and ornament had to go by the board and architectural effect had to be obtained in the simplest way by close attention to scale and proportion, unaided by trimmings of any sort. The ordeal was a severe one for the architect, but the results achieved had been of the greatest value to architecture in general, and had proved beyond question that by strict adherence to a programme a notable result might be obtained by a designer of sensibility. Boiled down, it was yet another example of cause and effect.

The lecturer illustrated his arguments by slides covering a wide field of example. Egyptian, Greek, Roman and Renaissance houses were reviewed, and stress was laid upon the importance of local conditions in developing a style. How materials could influence design was brought out by illustrations from stone districts and those where timber was plentiful. He concluded by mentioning more modern methods and materials.

R.I.B.A. EXHIBITIONS OF DESIGNS

The designs of students of schools of architecture recognized for exemption from the R.I.B.A. Final Examination will be exhibited in the R.I.B.A. Galleries from October 14 to 20, 1931, inclusive, between the hours of 10 a.m. and 8 p.m. (Saturday, 10 a.m. and 5 p.m.). The R.I.B.A. Silver Medal for recognized schools and £5 in books is awarded for the best set of drawings submitted.

The designs of students of schools of architecture recognized for exemption from the R.I.B.A. Intermediate Examination will also be exhibited in the R.I.B.A. Galleries from October 24 to 30, 1931, inclusive, between the hours of 10 a.m. and 8 p.m. (Saturday, 10 a.m. and 5 p.m.). The R.I.B.A. Bronze Medal for recognized schools and £5 in books is awarded for the best set of drawings submitted at this exhibition.

MEDIÆVAL AND RENAISSANCE ART

Sir Banister Fletcher, PP.R.I.B.A., lecturing at the L.C.C. Central School of Arts and Crafts on Wednesday last, gave a "Comparative Analysis of Mediæval and Renaissance Architecture in Europe." He pointed out that Gothic buildings, which were distinguished by the pointed arch, were traditional and were the result of the combined effort of master mason and craftsmen, whereas Renaissance buildings, which were distinguished by the circular arch, were designed as works of art and were the result of individual effort.

Contrasting the differences in respect of the essential features of these two great styles—the plans, walls, openings, roofs, columns, mouldings, and ornament—the lecturer emphasized the beauty and strength inherent in both. An interesting set of lantern slides, making clear the fundamental differences, was shown, and prepared the audience for the detailed exposition of Renaissance architecture which is to be given in the succeeding lectures.

RESEARCH IN THE BRITISH GLASS INDUSTRY

Sir Richard Gregory, Bart., LL.D., D.SC., will open at 4 p.m. on Wednesday, October 21, at the Science Museum, South Kensington, an exhibition which will illustrate modern research in the British glass industry. This exhibition is being arranged by the Society of Glass Technology, with the support of the Glass Research Delegacy.

In addition to the exhibition (which will be set out in a small gallery at the right-hand side of the entrance in Exhibition Road), there will be lectures on Thursday afternoons by well-known authorities, dealing with the modern developments in optical glass, plate glass, electric light bulbs, safety glass and artistic glassware. The public will also have an opportunity of seeing glassmaking in cinema films. These films will be shown every day at 4.15 p.m. until the exhibition closes on December 31, 1931.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Dissolution of Parliament

PARLIAMENT was dissolved on Wednesday, October 7, and the polling day has been fixed for Tuesday, October 27.

Houses for Aged People

Mr. Herriotts asked the Minister of Health how many small houses for aged people had been approved by his department; how many had been completed; and what was the average weekly rent.

Mr. Chamberlain said that the erection of 1,380 houses of this type had been approved, and 130 were completed by August 31 last. He had no information as to the rents charged for these houses.

Housing Progress by Local Authorities

Mr. Mills asked the Minister of Health if he would state the number of local authorities who had received sanction for house-building programmes of over 100 houses since January, 1931; how many had been started; and how many of such authorities had received sanction or refusal since July 24.

Mr. E. D. Simon said that the number of local authorities was 126. These local authorities had commenced to build over 27,000 houses since January 1, 1931, but the information available did not enable him to say how many of these houses were included in the authorizations given since that date. The numbers of local authorities referred to in the last part of the question were fourteen and none respectively.

Housing (Rural Workers) Act, 1931

Mr. Perry asked the Minister of Health if he would state if the operation of the Housing (Rural Workers) Act, 1931, was to be suspended or restricted as part of the Government's economy policy; and, if so, what steps would be taken to meet the need for more and cheaper houses in rural areas.

Mr. Gould asked whether it was the intention of the Government to carry out the housing programme of building 40,000 agricultural cottages during 1931–32, as provided for under the Rural Workers Act, 1931.

Mr. Chamberlain said that there was no intention of repealing the Housing (Rural Authorities) Act, 1931, to which he assumed the questions referred. Applications from Rural District Councils under this Act were still coming in, and in accordance with Subsection (3) of Section 1 all such applications would be eligible for consideration provided that they were made before November 30 next. In accordance with the Act, applications would be first considered by the committee appointed by his predecessor, of which Sir Tudor Walters was chairman.

LAW REPORT

QUESTION OF TITLE

Poett v. *Poett. King's Bench Divisional Court. Before Justices Swift and Charles*

AN interesting point of law as to landlord's title was raised by the appeal of the defendant in this case, Mr. A. J. L. Poett, from a judgment of the County Court judge of the Bow County Court.

The plaintiff in the action in the court below was Mrs. J. Poett, who was the mother of the present appellant, and she sued for possession of a house in Gamuel Road, Walthamstow, and for rent and mesne profits. The County Court judge found in favour of the plaintiff.

The defendant now appealed, and Mr. Goff, his counsel, said in the court below the County Court judge refused to admit evidence that the defendant was the freeholder of the premises, and counsel complained that the judge had held that the relation of landlord and tenant existed between the mother and her son. Counsel said his contention was that the land on which the house was erected was conveyed by the mother, the plaintiff in the County Court action, to her son, and the house was built by money raised by mortgage from the Poett family. In this house the defendant resided. There was a book, which was called a rent book, in which weekly payments of £1 were entered, but as a matter of fact they were not rent payments, but represented repayments on account of the mortgage monies. Under these circumstances, counsel submitted that it was wrong on the part of the County Court judge to have shut out documents tendered by the appellant in regard to the conveyance of the mortgage. He contended that the judgment was therefore wrong, and that his client was entitled to judgment.

Mr. Lynton Thorp, for Mrs. Poett, submitted that the County Court judge was right in rejecting the mortgage and conveyance documents, as it was a principle of law that no tenant could impeach a landlord's title. Continuing, counsel said the mortgage was transferred to his client in 1929, and although the appellant owned the land, his client, under the Law of Property Act, was interested in the land for a long term, and the appellant's reversion would not fall in until the end of his client's term. Under these circumstances he submitted that the judgment was right.

The court allowed the appeal with costs, and entered judgment for Mr. Poett, the appellant, with costs in that court and in the County Court.

Mr. Justice Charles delivered the judgment of the court, and said he and Judge Swift had looked at the deeds because they thought they ought to look at them in order to arrive at a right conclusion. As far as he knew, there was nothing in law to stop them looking at the deeds under the circumstances. In the opinion of the court, if the County Court judge had looked at those documents, he would have found that the land belonged to the appellant, and that no rent was paid at all. Here the respondent had said that at first there was no mention of rent, and that it was not mentioned till March, 1927. In the view of the court, the house and the land was the property of the son, and there was no relationship of landlord and tenant between the appellant and respondent. Under these circumstances the judgment of the County Court judge was not good in law.

Mr. Justice Swift agreed.

COMPETITIONS OPEN

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions, etc., obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, OCTOBER 14

C. F. ANNESLEY VOYSEY: EXHIBITION OF WORK. At the Batsford Gallery, North Audley Street, W.1. 10 a.m. to 6 p.m. (Saturdays, 10 a.m. to 1 p.m.). Until October 17. **10 a.m.**

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow. Until October 24.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Early Renaissance of Florence." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, OCTOBER 15

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. First of six lectures on "The History of English Architecture—XIIth Century." By Herbert Mansford. **7.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "Excavations at Hollingbury Camp, Sussex." By Dr. E. Cecil Curwen, F.S.A. **8.30 p.m.**

FRIDAY, OCTOBER 16

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND. Fourth National Conference. At the Guildhall, Bath. Also October 17. **10 a.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Council Meeting, 3 p.m. General Meeting; President's Address, 6.15 p.m. **3 p.m.**

LONDON SOCIETY. Visit to St. Mary's Church, East Ham. 2.30 p.m. At the Royal Society of Arts, John Street, Adelphi, W.C.2. First demonstration of town-planning by films: "1—How not to do it"; "2—The Proper Way," 5 p.m. **2.30 p.m.**

SATURDAY, OCTOBER 17

Sunrise, 6.24 a.m. Sunset, 5.6 p.m.

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At Manchester. "Modern Interior Decoration." By John M. Holmes.

R.I.B.A., 9 Conduit Street, W.1. Second of four non-technical lectures. "Some Opinions Upon Furniture and Decoration." By H. S. Goodhart-Rendel, F.R.I.B.A. Chairman: D. S. MacColl, M.A., HON. A.R.I.B.A. **3 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. London and Home Counties Branch. Visit (afternoon) to the London Power Company's Station at Deptford.

TUESDAY, OCTOBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. Annual Dinner, to be held in the Empire Rooms, Trocadero Restaurant, Piccadilly Circus, W.1.

KING'S COLLEGE, Strand, W.C.2. Second of nine public lectures on Gothic Art. "English Transitional and Early Gothic." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTE OF FUEL. At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. Presidential address by Sir Hugo Hirst, BT. **6 p.m.**

LONDON SOCIETY. Visit to the works of George Mason & Co., Ltd., 265 Merton Road, Southfields, S.W.18. **2.30 p.m.**

ILLUMINATING ENGINEERING SOCIETY. At 15 Savoy Street, Strand, W.C.2. Report on the progress in Illuminating Engineering prepared by the Technical Committee. **7 p.m.**

WEDNESDAY, OCTOBER 21

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Housing and town planning tour to Manchester and Liverpool. Departure to Manchester from Euston at 6.5 p.m. **6.5 p.m.**

INSTITUTE OF FUEL. Annual Dinner and Dance, to be held at the Connaught Rooms, Great Queen Street, W.C.2. Sir Hugo Hirst, BT., will preside. 6.45 for 7.15 p.m. **7.15 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Early Renaissance in Northern Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, OCTOBER 22

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Town Hall, Manchester. Lecture dealing with the activities of the Corporation with regard to housing, etc. 10 a.m. Luncheon (by invitation of the Corporation). 12.45 p.m. Tour of slum areas, housing estates and town-planning roads. 2 p.m. Reception in the City Art Gallery. 8 p.m. **10 a.m.**

FRIDAY, OCTOBER 23

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Municipal Buildings, Liverpool. Address by the Chairman of the Housing Committee on the work of the Liverpool Housing Committee. 10.30 a.m. Visit to Springwood Estate. 12 noon. Luncheon at Childwall. 1 p.m. Visit to housing estates. 2.30 p.m. **10.30 a.m.**

LONDON SOCIETY. Visit to the Chelsea Royal Hospital, Royal Hospital Road, S.W.3. **2.30 p.m.**

SATURDAY, OCTOBER 24

Sunrise, 6.37 a.m. Sunset, 4.51 p.m.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At Liverpool. Visit to slum-clearance areas. 10 a.m. Return to London at 2.5 p.m., arriving at Euston at 6 p.m. **10 a.m.**

R.I.B.A., 9 Conduit Street, W.1. Third of four non-technical lectures. "Tendencies in very Modern Buildings." A. S. G. Butler, F.R.I.B.A. Chairman: Sir Richard Paget, BT., HON. A.R.I.B.A. **3 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Second of five non-technical lectures on Present-day Architecture. "Furnishing and Decorating the House." By Edward Maufe, M.A., F.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 27

KING'S COLLEGE, Strand, W.C.2. Third of nine public lectures on Gothic Art. "French Gothic: Paris, Chartres, Amiens, etc." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

TRADE NOTES

On Thursday, October 1, the new showrooms of the "Treetex" Insulating Wallboard Manufacturers was opened at 421-4 Australia House, London, W.C.2. These showrooms have been constructed to render the comparatively new science of insulation against heat and sound self-explanatory. Among the exhibits are a sound-proof telephone box, and a contrivance which demonstrates the relative resistance to outside temperatures of an ordinary room and a room built with Treetex. There are also incorporated in the showrooms a number of novel ideas for modern interior decoration, carried out with the same product. Low density and high structural strength are claimed to be the secret of the resistance of Treetex to sound, and this quality also enables the material to resist heat and cold. It might, therefore, be thought that sheets of Treetex would have to be thick and heavy. Actually, however, they are extremely light and flexible, and are suitable, it is claimed, for ceilings, walls and panels in houses. It is interesting to note that should a careless painter use his ladder as a battering ram on the walls, it need not be patched. It would merely be necessary to replace the damaged portion with a new panel, at a trifling cost.

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A booklet entitled *Architectural Woodwork and Furniture* has recently been issued by Messrs. Drytone, Ltd., of Drytone House, 65 High Street, Camden Town, N.W.1, containing illustrations of several buildings in which Drytone woodwork has been used. These include the Underground Headquarters, 55 Broadway, Westminster, S.W. (Adams, Holden and Pearson, FF.R.I.B.A.); Friends House, Euston Road, N.W.1 (Hubert Lidbetter, F.R.I.B.A.); St. Alphage's Church, Hendon (Nicholas and Dixon-Spain, FF.R.I.B.A.); Peter Potter's Shop, Wigmore Street, W.1 (L. de Soissons and Wornum, FF.R.I.B.A.); Masonic Temple, Birmingham (Crouch, Butler and Savage, F.R.I.B.A.); the Railway Hotel, Edgware (A. E. Sewell, L.R.I.B.A.); and the Nurses' Home, University College Hospital (Michael Waterhouse, F.R.I.B.A.). Among the domestic work illustrated are houses designed by Maxwell Ayrton, F.R.I.B.A., Burgess, Holden and Watson, FF.R.I.B.A., W. J. Palmer-Jones, C. H. James, F.R.I.B.A., Leonard Martin, F.R.I.B.A., Mathew Dawson, F.R.I.B.A., E. A. Stone, and Douglas Smith and Barley, A.R.I.B.A. Each photograph in the booklet is accompanied by a brief description. A photograph of the interior of a house in Hampstead Lane, designed by Douglas Smith and Barley, is reproduced on this page.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Wotton House Hostel, Gloucester (pages 490–494). General contractor, John Simmonds. Sub-contractors : The Brightside Foundry and Engineering Co., Ltd., heating; Smith and Lamerton, electric lighting; Benham and Sons, Ltd., kitchen equipment; Doulton & Co., Ltd., and Shanks & Co., Ltd., sanitary fittings; Crittall Manufacturing Co., Ltd., steel windows; Stonehouse Brick and Tile Co., facing bricks; The Gloucester Stone Co., Ltd., reconstructed stone and staircases; R. W. Brooke & Co., Ltd., wood block flooring; Marley Bros., Ltd., locks; Engert and Rolfe, Ltd., asphalt flats; H. H. Martyn & Co., Ltd., wrought ironwork and carving.

Jantzen Knitting Mills, Great West Road, Brentford, Middlesex (pages 498–499). General contractors, The Pitcher Construction Co., Ltd., who were also responsible for the excavations, foundations, plumbing, glass, plaster and joinery. Sub-contractors : Williamson Cliff, Ltd., facing bricks; John F. Shackleton and Sons, Ltd., stone; A. D. Dawnay and Sons, Ltd., structural steel; Asbestos Cement Building Products, Ltd., special roofings; Moler Products, Ltd., Moler slab partitions; John Boulting and Sons, central heating and ventilation; Duncan Watson, Ltd., electric wiring; Benjamin Electric, Ltd., and Duncan Watson, Ltd., electric light fixtures; Crane - Bennett, Ltd., sanitary fittings; Henry Hope and Sons, Ltd., casements and window furniture; London Telephone Service, telephones; J. W. Whitehead and Sons, Ltd., marble; Metropolitan Water Board, water supply; David Allen and Sons, Ltd., signs.

House at Kirkby Overblow, Yorkshire (pages 500–501). General contractors, William Irwin & Co., Ltd. Sub-contractors : Tunstall & Co., Ltd., damp-courses and asphalt, roofing, rock asphalt ; Expanded Metal Co., Ltd., reinforced concrete; Depledge & Co., Ltd., structural steel; Mellowes & Co., Ltd., patent glazing, casements and window furniture; "Stic B.," Ltd., waterproofing materials; Leeds Marble and Heating Co., Ltd., central heating; Eagle Range Co. and Beeston Boiler Co., stoves; Burrett and Walford, grates, marble, tiling, metalwork, door furniture and mantels; Beeston Boiler Co., boilers; Best and Lloyd, Ltd., and Troughton and Young, Ltd., electric light fixtures; Ellis and Openshaw, sanitary fittings; Cowling and Hobson, plaster.

The staircase hall of a house in Hampstead Lane, London. Designed by Douglas Smith and Barley. Instead of panelling the hall and staircase in the ordinary way, it was decided in this case to use moulded oak boarding of random widths, secured with sherardized nails running in regular lines to form a pattern, thus securing pleasant uniformity. The whole of the work is drytoned to afford a pale weathered finish.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS]

Messrs. Mann, Crossman and Paulin have acquired a site in Upney Lane, BARKING, for the erection of off-licence premises.

Plans passed by the BARKING Corporation: Houses, Alfreds Way, for Mr. A. J. Maffey; factory, Alfreds Way, for Messrs. Scoffin and Willmott; extensions, Tangent Works, Abbey Road, for Mr. Stanley Waghorn; offices and six shops, East Street, for Messrs. Glenny; timber store, Town Quay, for Messrs. Page, Calman & Co.; seventeen shops, Lodge Avenue, for the L.C.C.; two houses, Boundary Road, for Messrs. T. Young and Sons, fourteen shops and sixteen garages, Longridge Road and Lodge Avenue, for Messrs. Hooker and Rodgers; offices and extensions, Jenkins Lane, for Messrs. Gross, Sherwood and Heald, Ltd.; fifty-one houses, Thornhill Gardens, for Mr. I. Leftley; shops and estate layout, Longbridge Road, for Mr. H. E. B. Meech.

The BERMONDSEY B.C. has asked the finance committee to submit a further loan estimate of £10,000 for the purchase of properties in the Rotherhithe Street clearance areas.

The Essex C.C. is to prepare plans for the erection of an admission hospital and the extension of the nurses' home at the BRENTFORD mental hospital. The estimated cost of the hospital is £50,000; and the nurses' home extension £11,500.

Plans passed by the BRENTFORD and CHISWICK U.D.C.: Ten shops, Great West Road, for Messrs. Hearn and Chuter; four houses, Grove Park Gardens, for Mr. A. S. Earl; four houses, Stamford Brook Avenue, for Mr. J. Caney; office and flats, Great West Road, for Messrs. E. H. Burgess, Ltd.; second portion of secondary school, Gunnersbury Avenue, for Mr. T. H. B. Scott; extensions to factory for Messrs. Trico-Folberth, Great West Road, for Mr. F. E. Simpkins; alterations and additions, Queen's Hall, Half Acre, for Messrs. W. G. Allen and C. Brown.

Plans passed at FULHAM: Buildings, Rannoch Road, for Messrs. J. Lyons & Co., Ltd.; conversion to flats, 3 and 4 Gliddon Road, for Messrs. J. Gilbert, Ltd.; additions, 477 Fulham Road, for Mr. C. Bailey; office, Addison Bridge Place, for Messrs. Maxwell & Co.

The HACKNEY B.C. proposes to proceed with the Banister Street clearance scheme.

Plans passed at HACKNEY: Houses, Baker's Hill; building, rear of 31 King Edward's Road; building, Mare Street; mattress factory, Bradbury Mews, Bradbury Street; factory, rear of 54 Brooksby's Walk; substation, offices, etc., Lower Clapton Road; three houses, Clapton Common; 4 houses, Spring Hill; house, Upper Clapton Road; houses, Amherst Road; block of offices, Queen's Road School, Queen's Road; rebuilding, Messrs. Gould's premises, Homerton Road.

The HORNSEY Corporation has obtained sanction to borrow £4,945 for the erection of baths and washhouses.

Plans passed at HORNSEY: Four blocks of flats, Wood Lane, for Messrs. R. W. Hill, Ltd.; alterations, 210 Archway Road, for Messrs. Ruddock & Co.; alterations, 5 Shepherd's Hill, for Messrs. C. Gordon, Ltd.; six houses, Muswell Hill Place, for Messrs. G. Knight & Co.

The Essex Education Committee has approved plans for the erection of new premises for the ILFORD county high school for boys, at a cost of £53,000.

The Essex Education Committee has approved plans for the erection of a technical college at LEYTON, at an estimated cost of £120,000.

SOUTHERN COUNTIES

Plans passed by the EASTBOURNE Corporation: Two houses, Decoy Drive, for Mr. F. C. Benz; house, Baldwin Avenue; additions for Kennett Bros., Ltd., at Brodwick Road, and additions at Ex-service Club, Pevensey Road, for Mr. A. Ford; house, Longland Road, for Mr. W. R. Hamblyn; house, South Lynn Drive, for Messrs. P. D. Stonham and Son; house, Watts Lane, for Mr. H. H. Ford; four houses, Royal Sussex Crescent, for Messrs. Bainbridge and Sons; alterations, 158 Terminus Road, for the Christian Science Society.

The EASTBOURNE Corporation has obtained sanction to borrow £10,200 for the construction of a central motor coach station.

Messrs. Rowsell and Ticehurst have prepared plans for the development of the Peppercombe estate, EASTBOURNE.

Plans passed by the HASTINGS Corporation: Alterations, Old Roar Farmhouse, Silverhill, for Messrs. Callow and Callow; two houses, Bexhill Road, for Mr. J. B. Mendham; house, Fairlight Road, for Mr. T. F. Smith; house, Sedlescombe Road, for Mr. A. Radcliffe; alterations and additions, 2 and 3 Eastern Street, for Mr. P. H. Oxley; eight houses, Hoads Head Road, for Mr. H. H. Ford; house, Amherst Road, for Messrs. Jeffery and Bowcock; extensions, tram depot, Beaufort Road, for Hastings Tramway Co.; ten bungalows, Tudor Avenue, for the New Ideal Homesteads, Ltd.

SOUTH-WESTERN COUNTIES

Plans passed by the CHELTENHAM Corporation: House, Lansdown Road, and alterations to premises, corner of High Street and New Street, for Mr. C. Dickins; house, Naunton Lane, for Mr. T. W. Smith; house, Tivoli Road, for Mr. R. V. Copeland; workshop and stores, Riviera Gardens, for Mr. A. G. Daft; two houses Station Road, Woodmancote, for Mr. R. E. Pearce.

EASTERN COUNTIES

The Essex C.C. Public Assistance Committee is to acquire premises in High Street, BILLERICAY, for adaptation as a children's home.

The Essex Education Committee has approved plans for extensions at NEWPORT grammar school, at a cost of £6,814.

The Essex C.C. has prepared plans for extensions at the SEVERALLS mental hospital to accommodate a further 180 patients, at an estimated cost of £52,600.

MIDLAND COUNTIES

The MANSFIELD Corporation has obtained sanction from the Ministry of Health for the erection, by direct labour, of fifty houses on the Ravensdale estate.

Plans passed by the MANSFIELD Corporation: Two houses, Berry Hill Road, for Mr. H. Baggaley; house, Chesterfield Road, for Mr. J. Beckett; two houses, Sutton Road, for Mr. W. R. Scott; two houses, Chesterfield Road, for Mr. F. E. Mann; house, Little Carter Lane, for Mr. J. E. Withers; bungalow, Clarendon Road, for Mr. W. C. Tyler; additions, factory, Stockwell Gate, for Mansfield Shoe Co., Ltd.; two houses, Somersall Street, for Mr. A. F. Brewen; two houses, Balmoral Drive, for Mr. E. M. Smith; fourteen bungalows, Columbia Avenue, for Messrs. Radford and Jenkins; alterations and additions, Welbeck Hotel, West Gate, for Messrs. James Hole & Co., Ltd.

The South Staffs. Joint Hospital Board is to enlarge the MOXLEY smallpox hospital, at a cost of £3,000.

Plans passed by the NORTHAMPTON Corporation: Two houses, Elmhurst Avenue, for Messrs. Sale & Co.; printing works extension, Wellington Street, for Messrs. Archer and Goodman; cottage, Mayorhold, for Mr. A. Sharman; house, Ardington Road, for the Northants Co-op. Society; ten houses, The Warren, Hardingstone, for Messrs. Jordans; house, Meadway, for Mr. W. W. Partridge.

The SMETHWICK Corporation has approved a report of the borough engineer for proceeding with the erection of a further 400 houses on the Warley estate, by direct labour.

The STOKE-ON-TRENT Corporation has passed plans for alterations at the Imperial Picture Palace, Glass Street, and the Grand Theatre, Hanley.

The STOKE-ON-TRENT Corporation has issued instructions for the preparation of a scheme for the provision of an additional sixty beds at the City Maternity Hospital, at a cost not exceeding £800 per bed.

NORTHERN COUNTIES

The BIRKENHEAD Corporation has obtained sites in Patten Street and Bidston Road for the erection of electricity substations.

Plans passed by the BOLTON Corporation: Twelve houses, Hollywood Road, for Messrs. T. P. Smith, Ltd.; fifteen houses, Walker Avenue, for Mr. W. Turner; two houses, Plodder Lane, for Mr. Thomas Booth; mission room, Southend Street, for International Holiness Mission; temporary church, Ripley Street, for Rev. Father J. O'Dwyer; eight houses, Bromwich Street, for Mr. J. E. Paiton; four houses, Crompton Way, for Mr. John Moore; two houses, Church Road, for Messrs. Haddock and Bowling; two houses, Bailey Lane, for Mr. F. Draper; two houses, Boot Lane, for Mr. J. H. Sharples; two houses and house and shop, Sharples Avenue, for Messrs. Price and Groves.

The HULL Corporation Electricity Committee is to erect three substations.

The HULL Education Committee is to proceed with the erection of another department to accommodate 400 children at the Ainthorpe Grove school.

The HULL Corporation has obtained sanction from the Ministry of Health for the purchase of Winestead Hall and 168 acres of land for the provision of a mental colony.

The HULL Corporation has approved plans for the erection of 168 houses in Marfleet Lane, for the Suttos trustees.

The TYNEMOUTH Corporation is to prepare a clearance scheme for the Liddell Street area.

The TYNEMOUTH Corporation is to erect a central garage at the works depot, at a cost of £8,250.

The TYNEMOUTH Corporation Trade and Commerce Committee has obtained sanction to borrow £22,196 for the purchase and adaptation of Cliffords Fort and the Low Lighthouse.

SCOTLAND

The following figures show the progress that has been made in State-aided housing schemes in Scotland to August 31, 1931: 1919 Act (by local authorities), 25,129; 1919 Act (by public utility societies), 421; private subsidy schemes (1919 additional Powers Act), 2,324; slum clearance schemes, 13,751; under construction, 1,208; 1923 Act, (by local authorities), 4,033; 1923 Act (by private enterprise), 20,101; under construction, 1,989; 1923 Act (by public utility societies), 80; 1924 Act (by local authorities), 51,835; under construction, 6,063; 1924 Act (by private enterprise), 2,975; under construction, 641; 1924 Act (by public utility societies), 127; under construction, 16; 1930 Act (by local authorities), 28; under construction, 2,379; unallocated houses under construction, 8; demonstration houses, 17; steel houses erected on behalf of Government by the Scottish National Housing Co., 2,552. Total completed, 123,373. Total under construction, 12,304. Total, 135,677.

The Ancient Order of Hibernians is to erect a hall in Greenvale Street, GLASGOW.

The GLASGOW Corporation is to prepare a clearance scheme for the Old Shettleston Road area.

On behalf of the Christian Brethren, Mr. James Stewart has purchased a site in Fulton Street, Knightswood, GLASGOW, for the erection of a church.

P

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
P_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead ..	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_2	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_2	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_1	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 9
¾" Crushed Ballast . . . . ,,	10 0
Building Sand . . . . . ,,	10 6
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R at Nine Elms :	s. d.
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d d F.O.R. London station :

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ⅜" . . . Sq.	1 1 0
,, ½" . . . ,, ,,	1 3 6
,, 1" . . . ,, ,,	1 5 6
,, 1¼" . . . ,, ,,	1 11 0
,, 1½" . . . ,, ,,	1 15 0
Deal matchings, ⅜" . . ,, ,,	16 0
,, ½" . . ,, ,,	17 6
,, 1" . . ,, ,,	1 6 0
Rough boarding, ½" . . ,, ,,	18 0
,, 1" . . ,, ,,	1 0 0
,, 1½" . . ,, ,,	1 8 0

Plywood, per ft. sup.

Thickness .	⅛"	¼"	⅜"	½"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon				
Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts :

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58½	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . . 57½	Galvanized gas .	47½
Water . . . 52½	,, water .	42½
Steam . . . 47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 0
,, ,, ⅞" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets. ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	2 9	3 3

PLUMBER

	s. d.
Lead, milled sheet . . cwt.	20 0
,, drawn pipes . . ,,	20 6
,, soil pipe . . ,,	23 6
,, scrap . . ,,	10 0
Solder, plumbers' . . lb.	11
,, fine do. . . ,,	1 3
Copper, sheet . . ,,	1 0
,, tubes . . ,,	1 4

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 6
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . bundle	2 4
,, rent . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 0
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,, over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay add	,,	3 0
If in underpinning ,,	,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all stretting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
3″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
¾″ do.	,,	3 4 0
⅝″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ¾″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	,,	1 19 0
Do. in covering to turrets, etc.	,,	2 6 0
Do. in soakers	,,	1 12 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	¾″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
	F.R. 1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	—	—	—	—	—	5 9
Extra, only to bends	Each —	—	—	—	2 3	6 6
Do. to stop ends	,, 7	9	1 0	1 3	2 0	—
Boiler screws and unions	,, 3 6	4 0	5 6	8 0	—	—
Lead traps	,, —	—	—	7 6	10 6	—
Screw down bib valves	,, 7 6	10 6	12 6	—	—	—
Do. stop cocks	,, 10 0	12 0	16 0	23 6	56 6	—
4″ cast-iron ½-rd. gutter and fixing	F.R.					1 3
Extra, only stop ends	Each					1 0
Do. angles	,,					1 6
Do. outlets	,,					3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.					1 6
Extra, only for shoes	Each					2 6
Do. for plain heads	,,					5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,, ,,	,,	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper from	,,	3 0

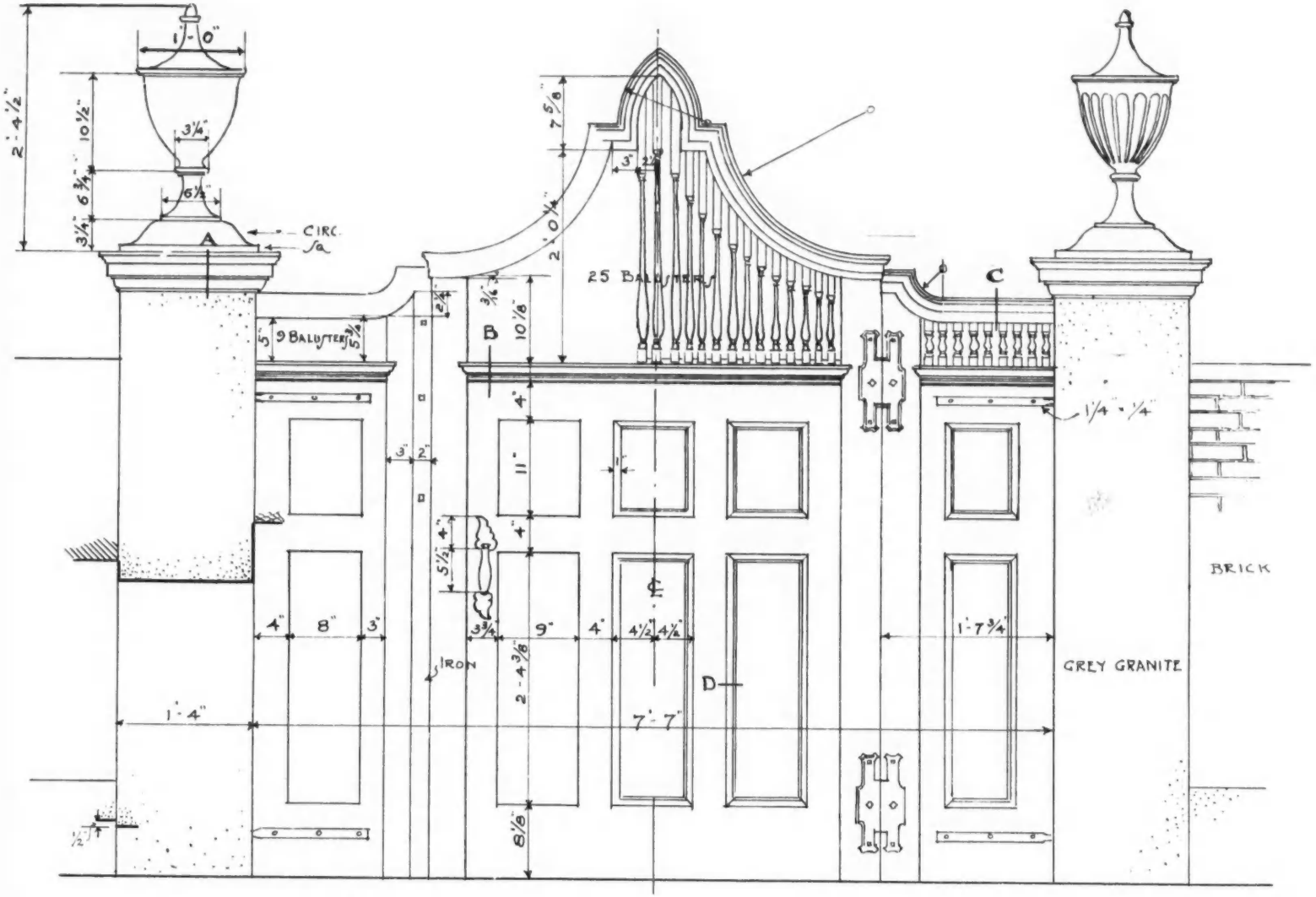
FROM THE NEW WORLD: 5

MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS

ENTRANCE GATEWAY TO ADAMS MANSION, QUINCY, MASS.

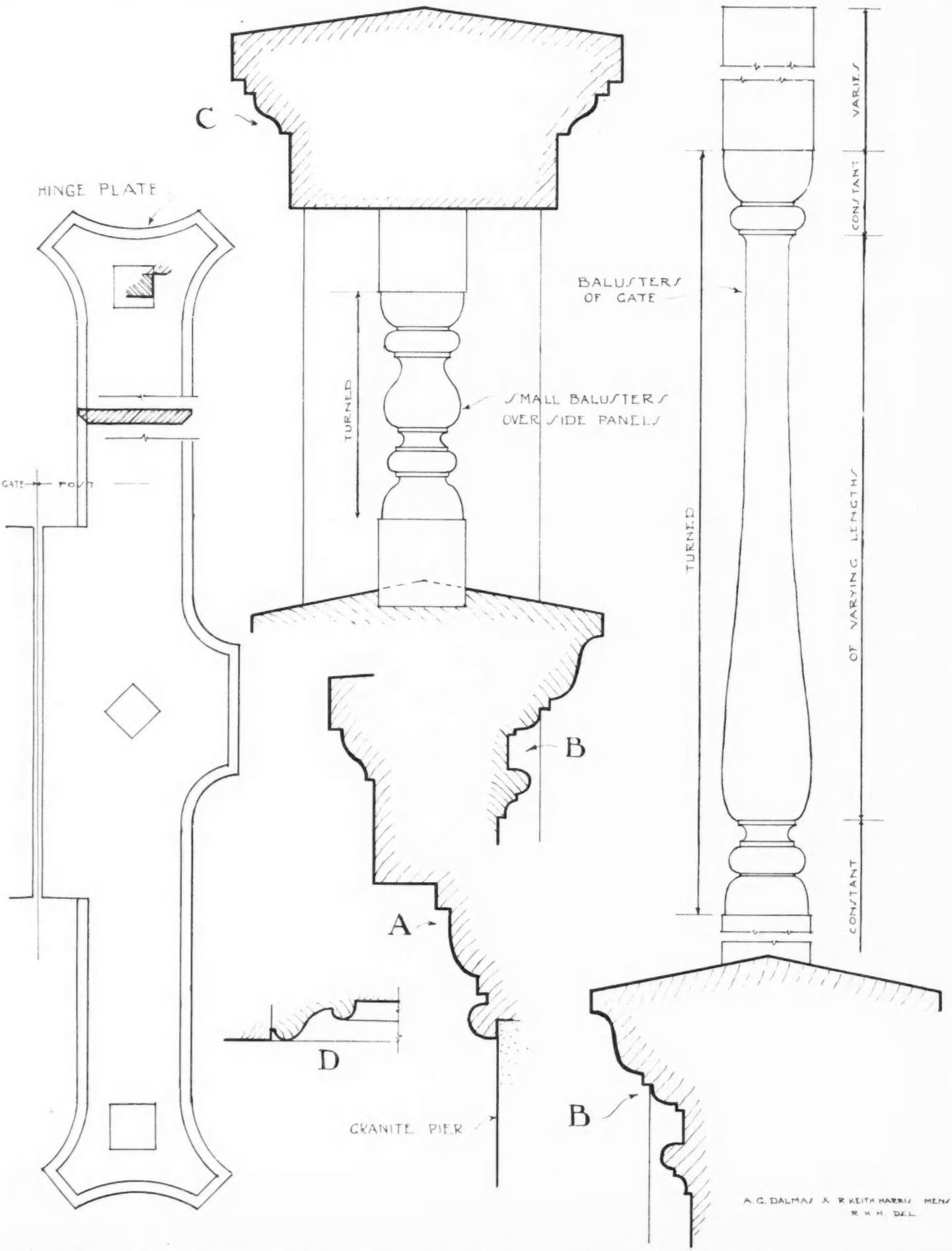
THE gateway of the above photograph—that to a house built at the commencement of the eighteenth century—is one of the most perfect examples of its kind, and little comment is needed to draw attention to its studied and refined design. The subtle line formed at the junction of the turned and square portions of the upper balusters is worthy of note, and eloquent of a resourceful vitality of mind that could visualize the parts in proper relation to the graceful whole.

The drawings reproduced to scale within were measured by R. Keith Harris and A. G. Dalmas; and drawn by the former.



GATEWAY TO ADAMS' MANSION, QUINCY, MASS.

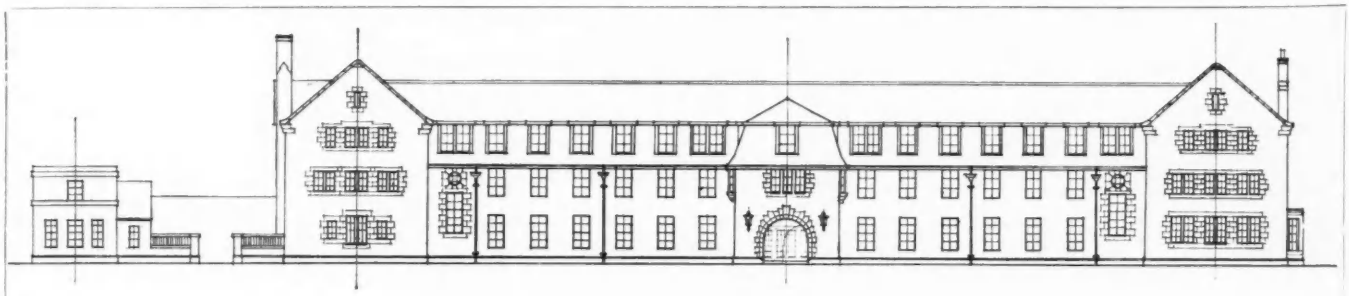
A.C. DALMAS & R. KEITH HARRIS, MEMS.
R.K.H. DEL.



¾ F. S. DETAILS OF GATEWAY, ADAMS' MANSION, QUINCY, MASS.

COMPETITION FOR NURSES' HOME, MONTROSE

WINNING DESIGN FOR NEW BLOCK AT THE ROYAL ASYLUM. BY J. A. OGG ALLAN



NORTH ELEVATION

THIS supplement is devoted to some of the principal drawings of the design which won the first premium in the recent competition, limited to architects practising in Eastern Scotland, for a new Nurses' Home at the Royal Asylum, Montrose.

The assessor, John Watson, A.R.S.A., A.R.I.B.A., of Glasgow, made his award as follows :

1st Premium (£75), J. A. Ogg Allan, F.R.I.B.A., Aberdeen.

2nd Premium (£50), Heiton and McKay, A.R.I.B.A., Perth.

3rd Premium, Johnston and Baxter, Dundee.

There were thirty-eight competitors.

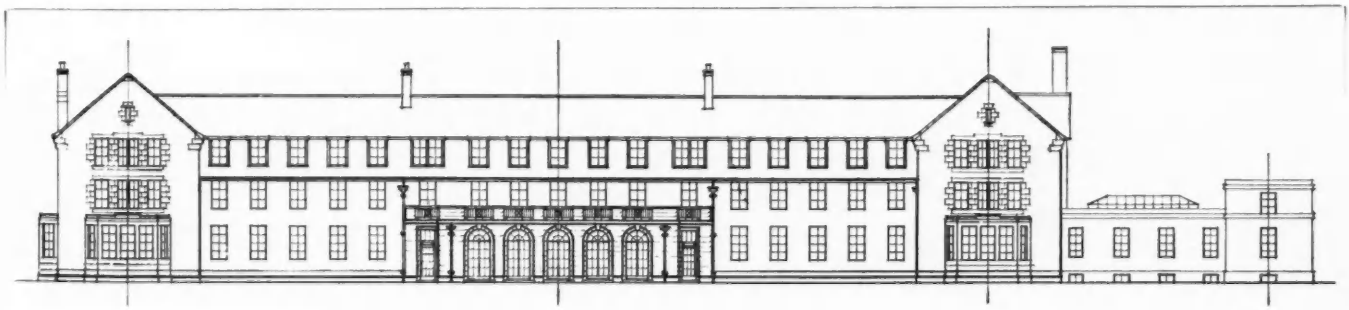
The projected building is the result of a decision to house the entire staff under one roof, and provides over a hundred bedrooms for sisters, nurses and others. These are arranged on the two upper floors, and in accordance with the conditions of the competition, all are fitted with built-in wardrobes. Another interesting stipulation was that in each of the bathrooms provision should be made for hair washing and drying.

On the ground floor there is a large recreation room, 50 ft. by 28 ft., and sitting-rooms for sisters and nurses, a lecture-room, a laundry, a dining-room to accommodate fifty persons at one sitting, with kitchen and servery, and a self-contained suite for the matron. It will be noticed that the kitchen and service quarters have a wing to themselves.

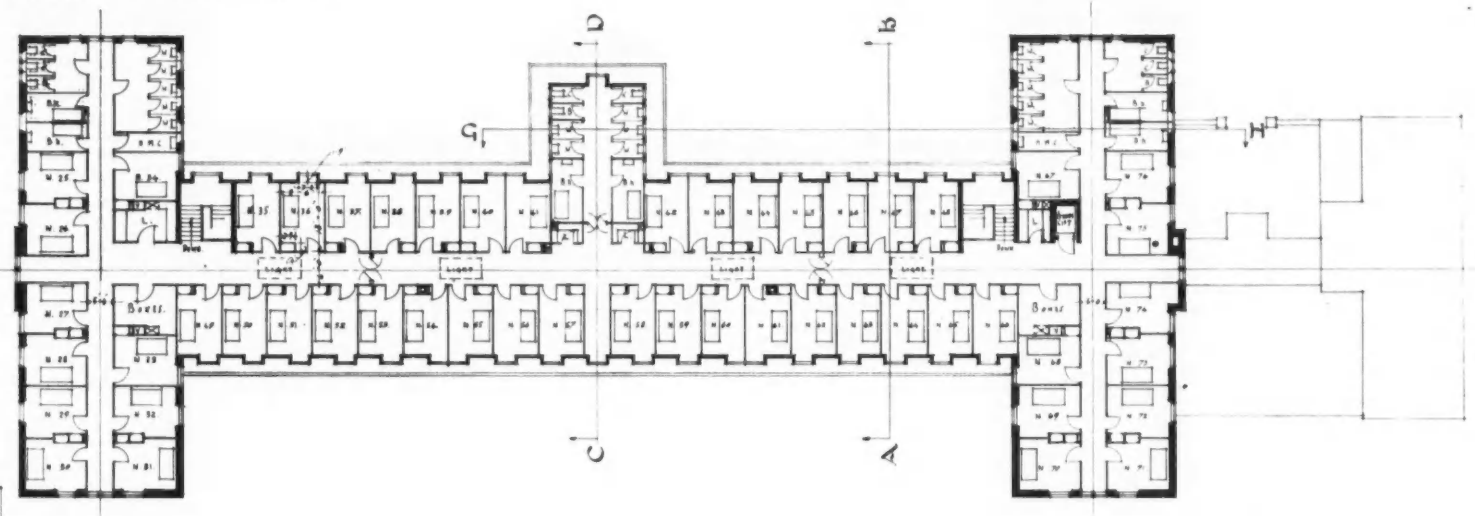
The site slopes so slightly as not to interfere with a symmetrical layout, which, as the block plan reproduced on the last page of this supplement indicates, has been conceived in relation to the existing asylum buildings. The proposed Nurses' Home is shown in black.

The appearance was to some extent determined by the conditions, which called for brick and roughcast, with stone dressings. The buildings were to cost not more than £30,000.

It is intended that the grounds and approach shall be laid out with roads and gardens, and that provision shall be made for tennis courts and a curling pond.



SOUTH ELEVATION



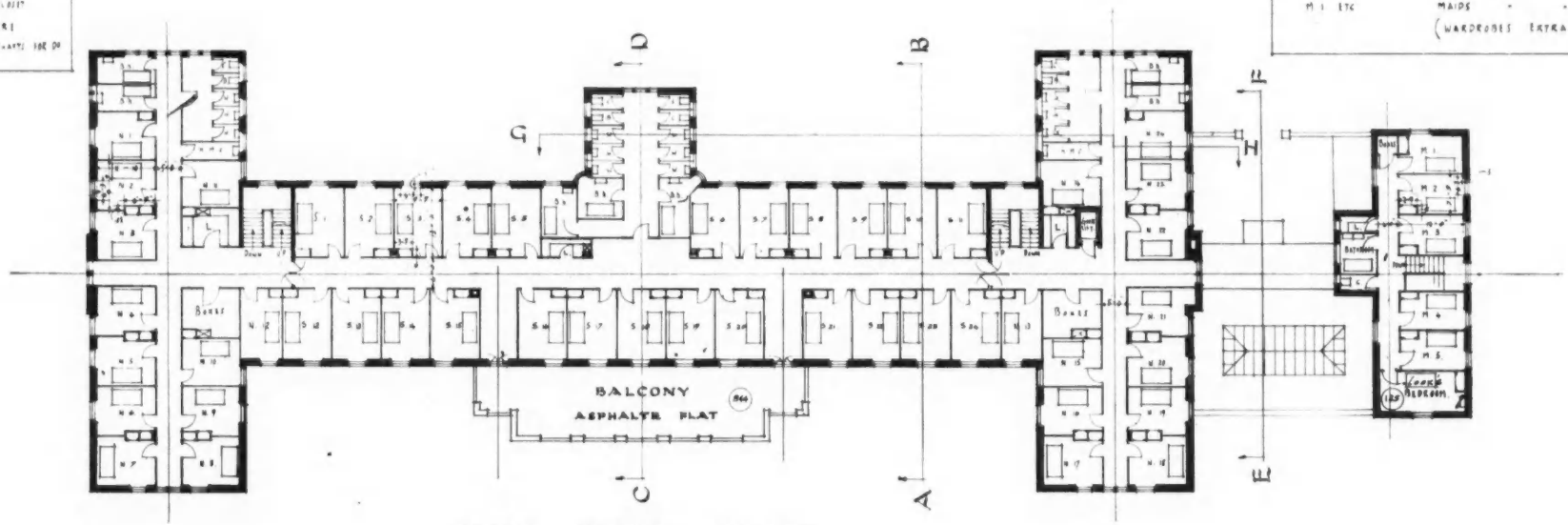
SECOND FLOOR PLAN

KEY TO LAVATORIES ETC.

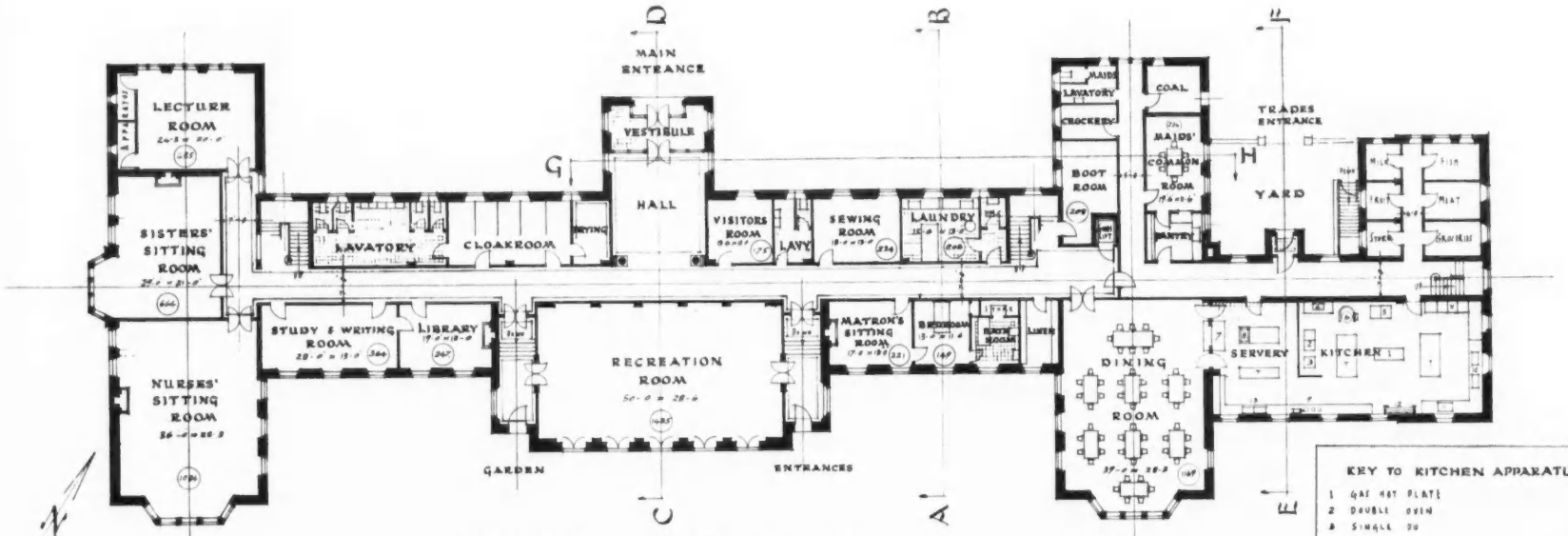
B	DENOTES	BIDET
B h	-	BATHROOM (WITH HAIRDRESSING)
C		W.C.
W		WASH HAND BASIN
H M C	-	HOUSEMAIDS CLOSET
L	-	LINEN (TYPE)
V	-	VENTILATION (SHAFTS SEE DR

KEY TO BEDROOMS.

S 1 ETC	DENOTES	SISTERS BEDROOMS EACH 150 SQ. FT. FLOOR AREA		
N 1 ETC	-	NURSES BEDROOMS	-	110 " " "
M 1 ETC		MAIDS	-	90 " " "
		(WARDROBES EXTRA TO ABOVE AREAS)		



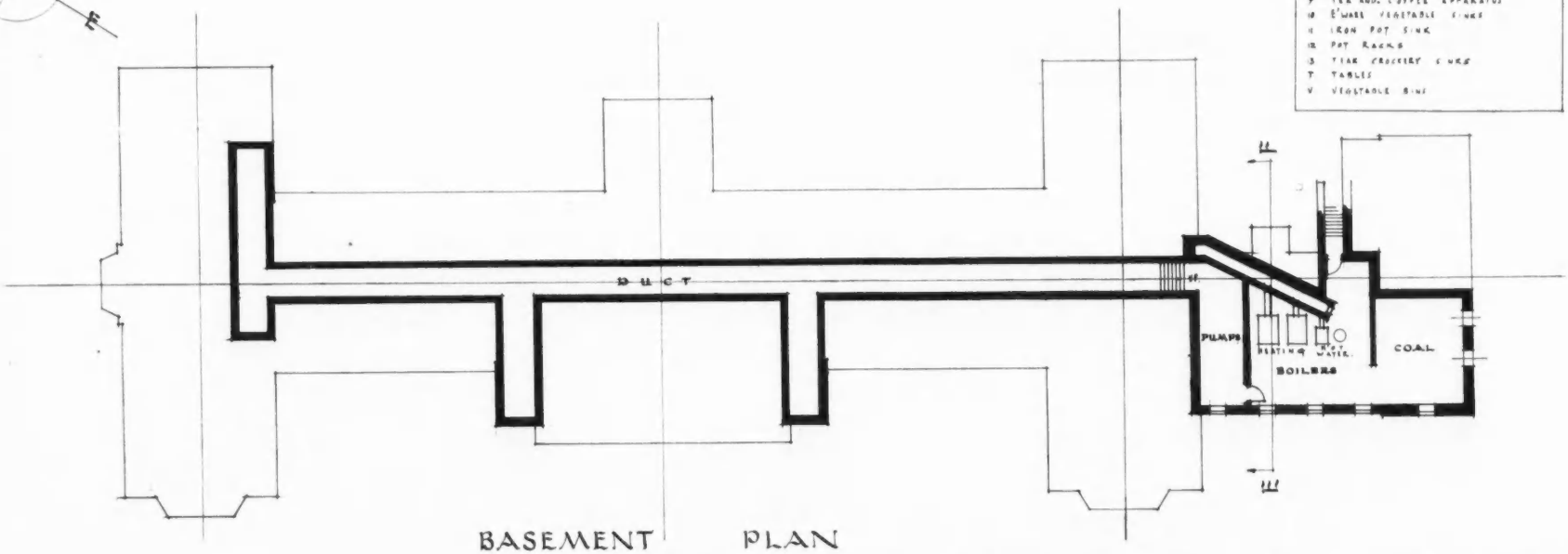
FIRST FLOOR PLAN



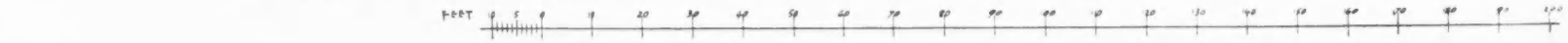
GROUND FLOOR PLAN

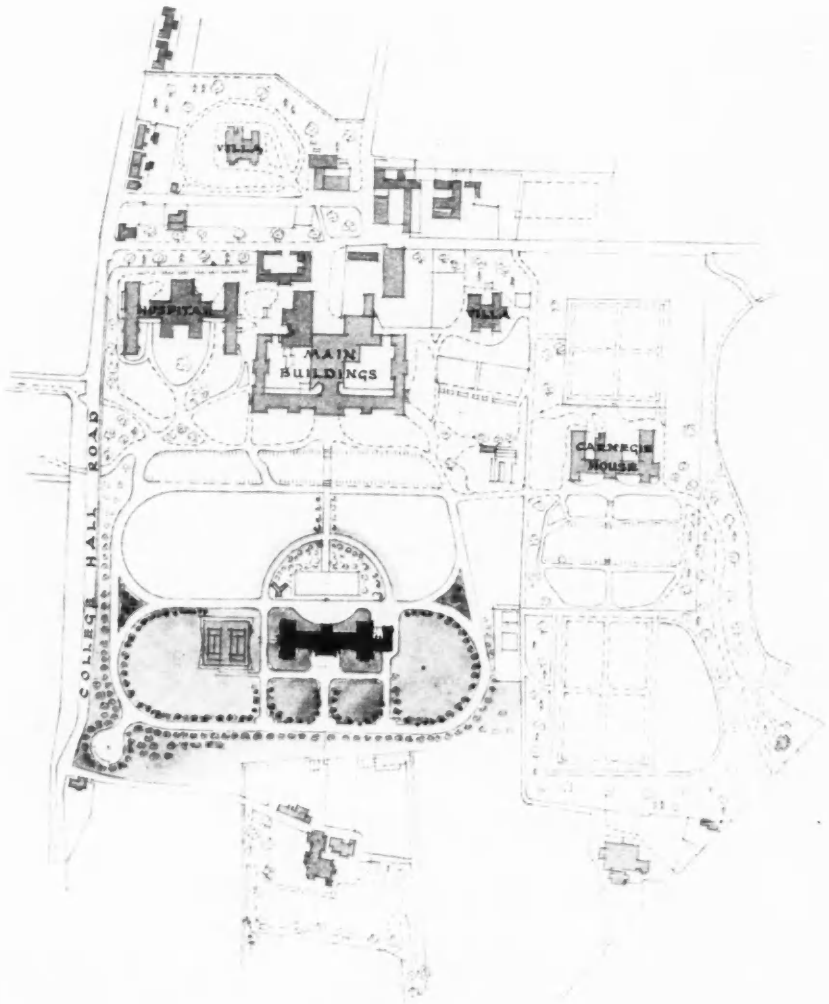
KEY TO KITCHEN APPARATUS

1 GAS HOT PLATE
2 DOUBLE OVEN
3 SINGLE DO
4 GRILL
5 DOUBLE STEAMER
6 10 DIAM. COPPER
7 HOT CLOSET AND CARVING TABLE
8 BAIN MARIE
9 TEA AND COFFEE APPARATUS
10 E'WARE VEGETABLE SINKS
11 IRON POT SINK
12 POT RACKS
13 TIAR CROCKERY SHKS
T TABLES
V VEGETABLE BINS



BASEMENT PLAN

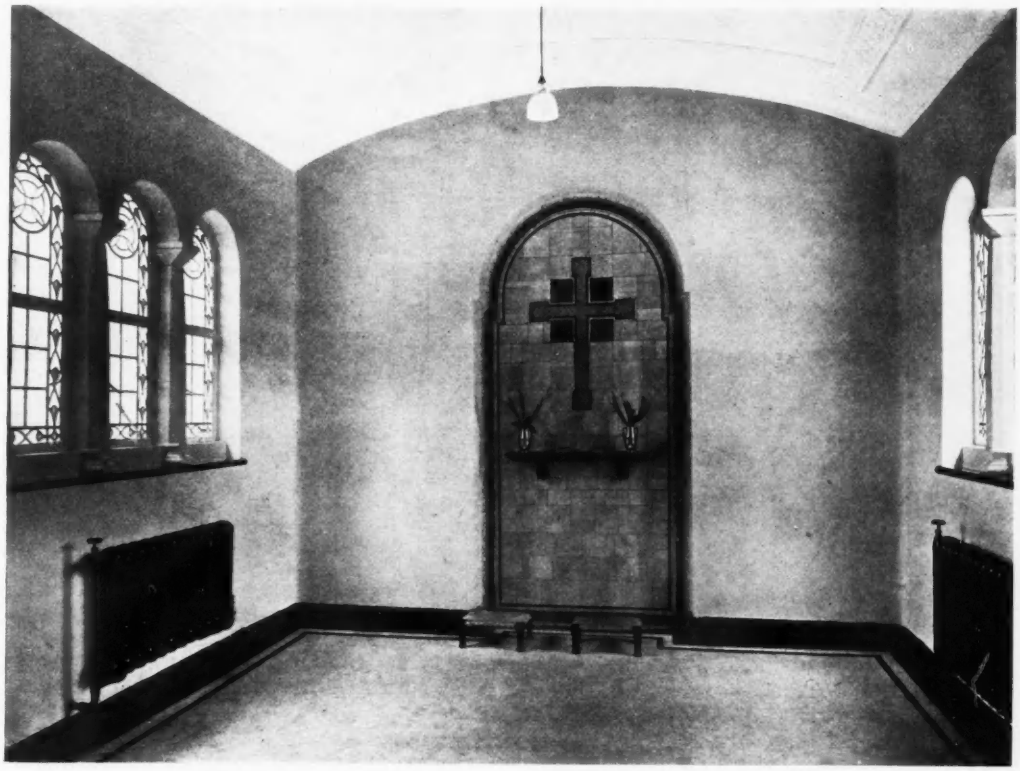




THE BLOCK PLAN

SELECTED PRECEDENTS:

MODERN CHURCH AND CHAPEL INTERIORS: I.



[Paine and Hobday, Architects.

1. MORTUARY CHAPEL, RED HILL HOSPITAL, EDGWARE, HERTS.

THE modern preference for interiors with plain surfaces is sometimes even more strikingly exemplified in ecclesiastical than in secular buildings. When skilfully handled, this austerity of unbroken lines is much more evocative of the true religious atmosphere than stereotyped reproductions of Gothic tracery or Romanesque mouldings. No type of sacred edifice calls for more absolute simplicity than the mortuary chapel, examples of which will be found in Figures 1 and 3.

Figures 3 and 4, which are reinforced concrete structures, recapture the spirit of Gothic without imitating the detail of any of its conventional forms. In the latter, the concrete beams of the ogival vaulting spring from brackets midway between the pointed aisle arches, and placed a little above their crowns. In the former, which is a circular building, they rise straight from the foundations, and then bend inwards at the tops of the windows to meet and interlace in a rosette on the conical roof.

[O. O. Kurz, Architect.

2. THE SEBASTIANSKIRCHE, MUNICH: PULPIT DETAIL

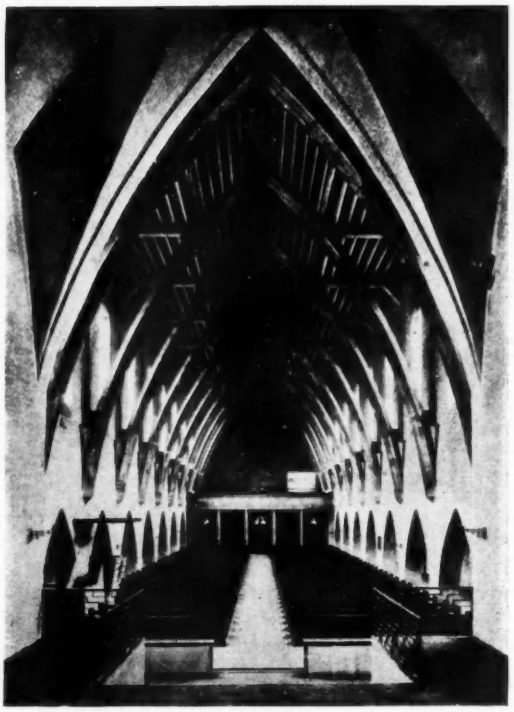
Figures 2 and 5 are examples of unrelieved blank wall treatment. The first interior relies for its effect on the Neo-Byzantine tempera decorations of the pulpit, a very fine wrought-iron altar-rail (unfortunately invisible in the photograph), and periodically renewed wreaths of foliage hung from key-stones over the middle of the aisle openings. Professor Gočár's impressive building is lit from three separate sources: the immense glass apse behind the altar, a series of transverse skylights in the flat roof overhead, and narrow horizontal windows in the side aisles.

Figure 1 is a good example of modern English simplicity which has not quite been able to make up its mind to eliminate all traditional details. One cannot help feeling, however, that something might have been done to make the radiator coils seem more at home in what is an otherwise careful composition. Figure 3 offers a most ingenious solution of this particular difficulty.

P. MORTON SHAND

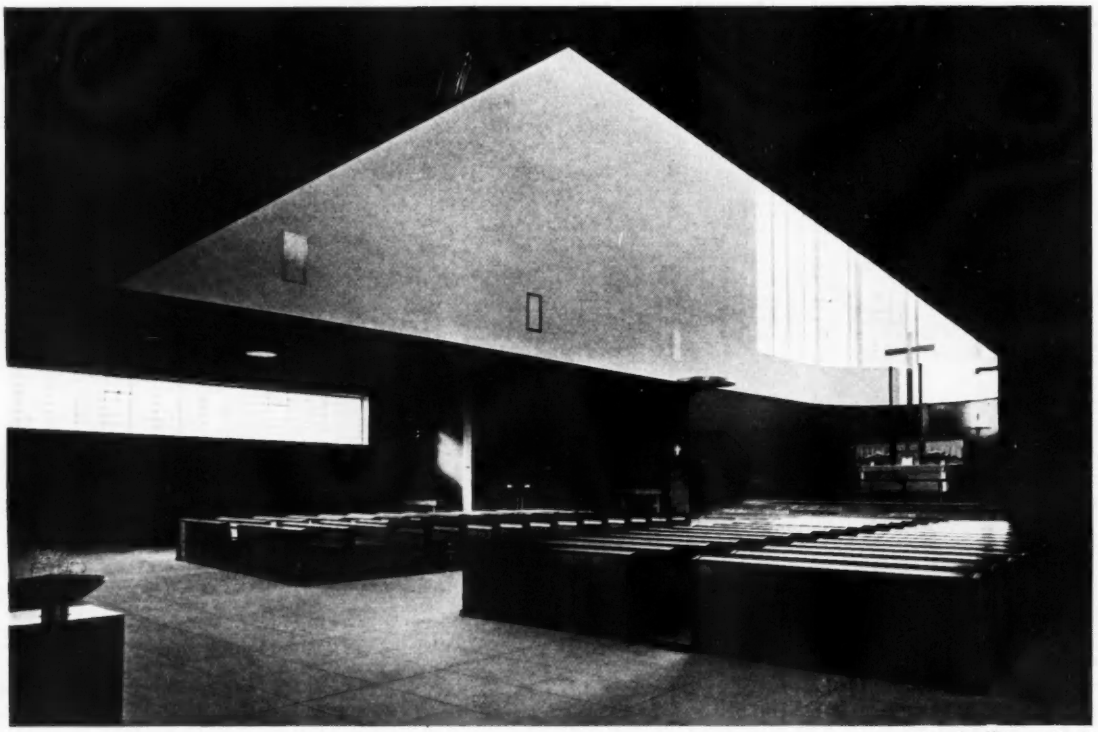
[*Dr. Fritz Schumacher, Architect.*

3. *MORTUARY CHAPEL AT OHLSDORF CEMETERY, HAMBURG*



A. Bosslet and K. Lochner, Architects.]
[*By courtesy of Wayss and Freytag A.-G., Frankfort-on-Main.*

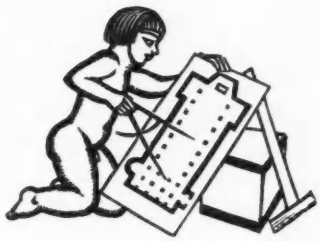
4. *CHURCH OF OUR LADY, LUDWIGSHAFEN-AM-RHEIN*



[*Josef Gočár, Architect.*

5. *ROMAN CATHOLIC CHURCH AT VRŠOVICE, PRAGUE*

THE ARCHITECTS' JOURNAL



WEDNESDAY, OCTOBER 21, 1931

THE COUNCIL ARCHITECT

ONE of the surest signs of the sickness which has overcome the art of architecture in this country is the ease with which its practice has become grafted upon the lower orders of local government.

The position of city or country architect has always been held in repute as carrying with it great responsibilities of administration and a wide field for the exercise of the art as well as the practice of architecture. In some cases the official architect has been a man of the highest standing, who has found within the limits of his province opportunities which he has turned to great account. Wren and Soane stand out as conspicuous examples.

But in the main, and despite the high qualifications of official architects, many large civic and country buildings have been the subject of open competition, or have been given to the leaders of the profession to design, the administrative duties of the official being valued independently of his claims to be pre-eminently a designer.

That was the position before the war. The war ended, social services expanded at a surprising pace as the country entered upon its gigantic housing programme.

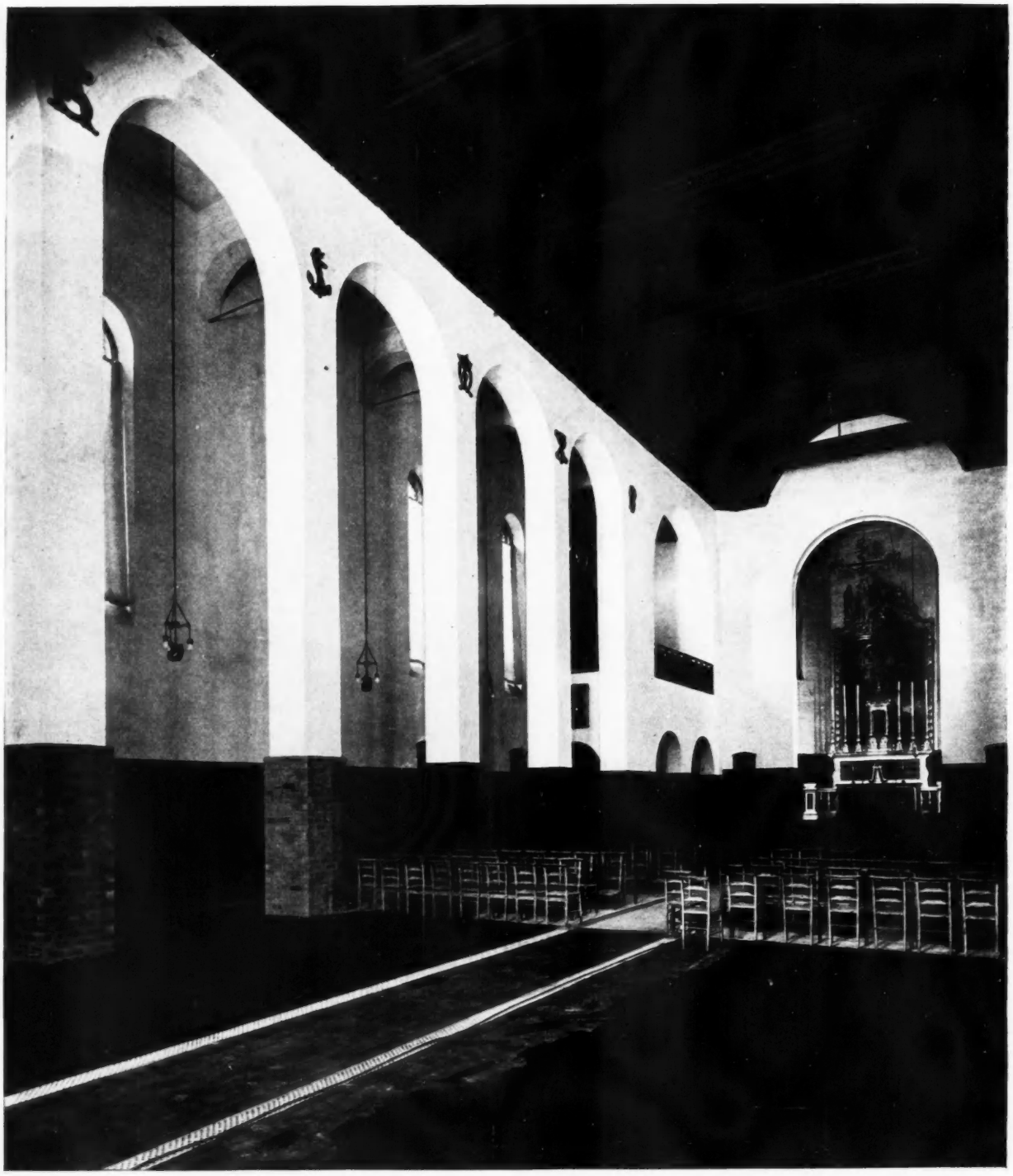
At first, housing was in the hands of practising architects, but before long the larger towns, with enormous building programmes before them, created separate architectural departments under the control of their engineers or official architects. In the case of large towns, the architectural responsibility was accepted, but the smaller councils that were quick to follow suit made light of the architect's work and employed their engineers, surveyors or sanitary inspectors in the capacity of architect, paying them something extra for their trouble, and footing the annual expenditure upon the cheap architectural assistance that alone made the system possible.

This resulted in an outcrop of housing that was in no wise a credit to local administration. If housing alone were in question, we might now be at the end of the trouble, but unfortunately the system is one that is calculated to show immediate economies in local administration book-keeping. It is not surprising, therefore, to find it extended to cover work of a costlier and more ambitious nature than housing, and the local engineer's name appears in connection with the design of schools, hospitals, baths, and all manner of buildings for which a Government loan is forthcoming.

And in the background are the multiplying desks of unknown and unacknowledged assistants, the upkeep of more than a practising architect's office staff, and the extra remuneration of a man unfitted for work which he does not, in fact, perform.

Add to this the particular evil which deprives such a system, under the beck and call of an annually elected council, of the real responsibility which is the very core of the *profession* of architecture, and its dangers may be viewed in their proper light.

It is unfortunate that the *cost* of the system is not publicly available, because it seems to us that the time is come when its bearing, not only upon the economics of local administration, but upon the progress of architectural thought and practice, should be subjected to a minute and impartial examination.



ST. PETER'S ROMAN CATHOLIC CHURCH, EDINBURGH

Mr. Christopher Hussey, in *The Work of Sir Robert Lorimer*, reviewed elsewhere in this issue, and from which the above illustration has been reproduced, points out that St. Peter's Church seems to represent a central type of which the Gothic variants and the Scottish National War Memorial were elaborations. As in his houses Lorimer went back to the Scottish tower, so his churches were natural developments from the Scottish primitive type. The interior, Mr. Hussey continues, was obviously what Lorimer concentrated on in this design of St. Peter's. It has the "rhythm" of a romanesque basilica combined with the simplicity and feeling for spatial relations that mark the best modern work.

NEWS & TOPICS

ENGLISH SITES FOR FOREIGN MANUFACTURERS

THE prospect of tariffs or duties has caused an influx of inquiries for factory sites from foreign firms who have hitherto supplied this country from abroad. The London Chamber of Commerce has in fact been inundated with requests, a great many by 'phone. Nor does it seem that the inquiries are restricted to a few industries, nearly every branch being represented, with perhaps a preponderance in the electrical, wireless and machinery trades. Requests are being sent out to town clerks for details of all accommodation available within their areas, a description of the services offered, transport, labour, local rates, wages, etc. It really looks as though our competitors are going to present us with the lion's share of our returning prosperity.

LIVERPOOL'S CHANGED OUTLOOK ON HOUSING

It seems to me, looking at a recent report on Liverpool housing, that the policy of that wealthy corporation has veered, over the course of years, from the depressingly mean to the sumptuously extravagant. The city must have wasted a great deal of money between these two extremes. The average cost of houses is now fairly low —£298 for a non-parlour house, excluding the cost of development—which does not compare favourably with similar work executed recently at Welwyn. Architectural standards of housing in Liverpool have risen enormously. The new work is urbanely Georgian, built often in long blocks with good connecting walls, the whole very successfully planned. One is reminded, when one looks for these housing schemes on the plan of the city, of the great life-work of Brodie, its late engineer. It is his boulevards that have given the schemes coherence, and made it possible for an already over-large city to throw out still further colonies into the country.

CONCRETE VILLAS FOR £300

I am always anxious to hear of new and cheaper methods of building houses, so it was with extreme interest that I read of the exploits of a Mr. Cruttendon, who is building concrete villas with unskilled labour for £300. But a plague upon these snappy papers and their special correspondents; for they do not say whether the walls of these concrete villas are solid or hollow, or what sort of concrete is used! From the photograph the house looks normal enough, but I don't imagine it is going to set our housing problem to rights.

BUILDING MATERIALS FROM GARBAGE

They are busy in Berlin converting the city's garbage into constructional material—building and paving stones, sheathing boards, etc. The process used is the invention of a Berlin chemist, S. W. Aretz. The garbage is collected by the operating company and brought to the yards, where glass, metal and other solid substances are sorted out and used for filling in low or swampy lands in the vicinity of Berlin. About a hundred tons of the material remaining are processed in the factory daily.

★

A mechanical sorting apparatus separates coarse rubbish from fine. From the latter building stones are made, which are, they say, in every respect equal to the best bricks. The coarse garbage contains large amounts of fibrous material, and from this building and sheathing boards are made which are almost unbreakable, can be worked with ordinary tools, and are cheaper than the usual plaster-of-Paris or other building boards. Other products are briquettes of from 3,500 to 6,000 caloric units, gas, tar and fuel oils. The building stones are cheaper than natural stone, and possess the further advantage that nails or screws can be driven into them, since they are not brittle.

DECREASING IMPORTATION OF TILES

Some interesting information on the decrease in the importation of foreign tiles was given by T. C. Howitt, in his presidential address to the Nottingham, Derby and Lincoln Architectural Society last week. I quote below Mr. Howitt's own words, in order to avoid misapprehension: "Many firms have continued to produce roofing tiles on antiquated methods, but one or two of the leading makers have seen the danger of foreign production, have reorganized the whole of their ideas, produced materials at economic prices and, in turn, have practically brought to a standstill the importation of foreign tiles to this country. Before this serious attack commenced, foreign tiles to the capital value of £120,000 were sent into England in one calendar month, whereas the return for August last amounted to only £19,000. Organized attacks on foreign material supplies on these lines are sure to be effective, and I feel that they should be encouraged by the architect."

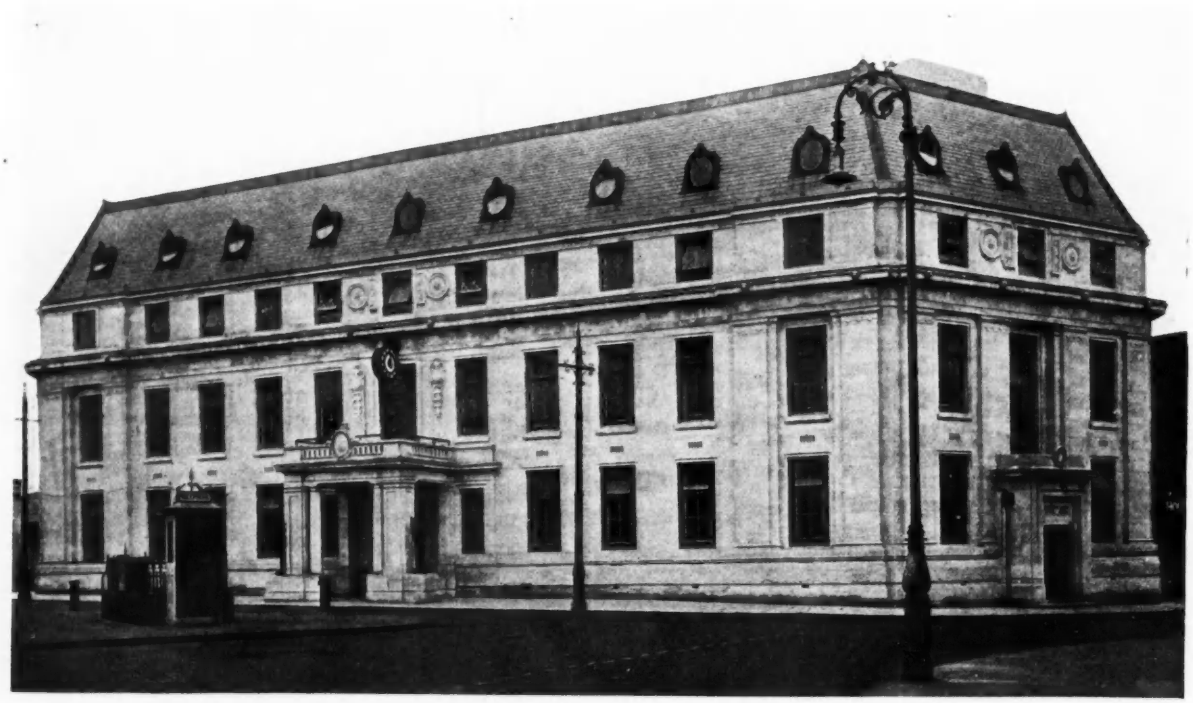
"DESIGN IN INDUSTRY" IN THE U.S.A.

The Public Library and Museum of Newark, U.S.A., has for a long time taken more than a curator's interest in design, that is to say, in everyday industrial design; and the efforts it has made to encourage good design have been practical. I have before me now a booklet called *Design in Industry*, which is in essence an annotated bibliography of all publications, foreign as well as American, dealing with the subject. This booklet is number twelve of a first volume, which have among them placed on record 849 items, either culled from magazines or in book form. It is needless to remark what impetus is given the movement by the possession of such a correlated body of information.

THE DAY OF THE "PLOT"

On November 4, 326 years ago, Guy Fawkes, the instrument of Robert Catesby and the other conspirators in the Gunpowder Plot, was keeping his lonely and perilous vigil under the House of Lords. The kegs of powder, the faggots, the coal, the slow-match, allowing him quarter-of-an-hour's "law," were all laid in readiness: materials of destruction. At this season of the present year, I have become aware, in my comings and goings in Queen Anne's Gate, that a plot with very different aims—to wit, constructive ones—has been going forward in the offices of the JOURNAL. It is due to be exploded the self-same day. But there is no secret about it. On the contrary, there is, I am told, an announcement in print on another page giving away the conspirators and the parts they have played in compiling the New Materials issue which is to see the light on November 4 next.

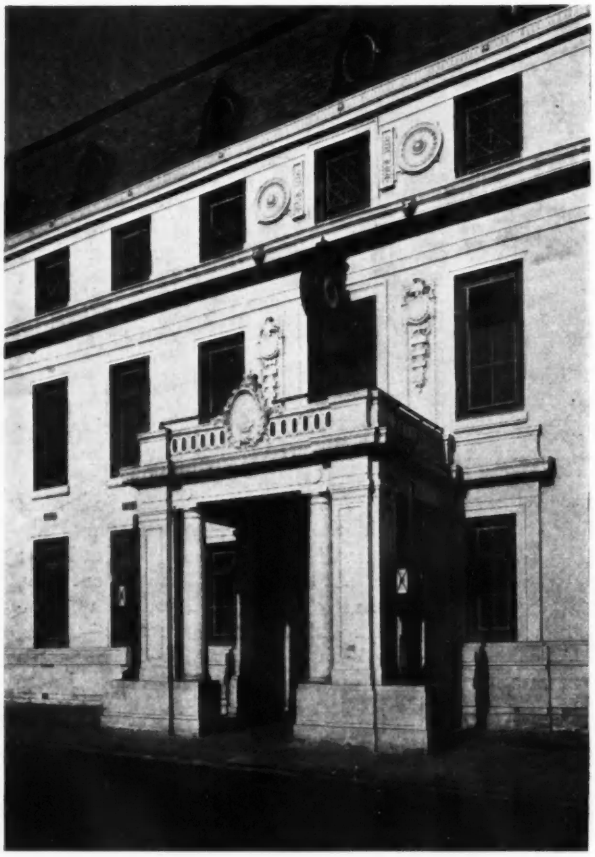
ASTRAGAL



The main front, to Broadway, of the Municipal Buildings. The walls are faced with Portland stone and the roof is covered with Westmorland green slates. Metal windows and dormers are fitted.

WIMBLEDON'S NEW

FROM DESIGNS BY



The main entrance to the Municipal Buildings from Broadway. On either side is a foundation stone, laid in February, 1930: one by the Mayor, Councillor G. T. Burrows, J.P., and the other by Alderman Shirl Mussell, F.C.I.S., Chairman of the Town Hall Committee.

ON Thursday, November 5, Prince George will officially open the new Wimbledon Town Hall and Municipal Buildings. It will be recalled that the designs of Messrs. Bradshaw Gass and Hope were awarded the first place in a competition promoted by the Wimbledon Corporation in 1928.

The site is of irregular shape, to take full advantage of which the municipal buildings have been planned to occupy that part of the land facing the Broadway, the town hall being placed behind. On the ground floor of the municipal buildings are the medical officer's and the borough treasurer's departments, and the rates office and the electrical engineer's room. Secondary stairs and lifts in close relation to the subsidiary entrances facilitate communication with the upper floors.

The council chamber is on the first floor, and is conveniently planned in relation to the main staircase, ante room, and the suite of committee rooms on the Broadway front. Retiring rooms for members of the council are also provided, and there is a gallery for the public, separately approached from the street.

On the first floor, in addition to the council chamber suite and committee rooms, are the mayor's parlour, councillors' library, the town clerk's department, and rooms for the

The Municipal Buildings; the Town Hall occupies the separate building seen on the left. The two blocks are connected by a bridge to enable them to be used in conjunction on civic occasions.

CIVIC BUILDINGS

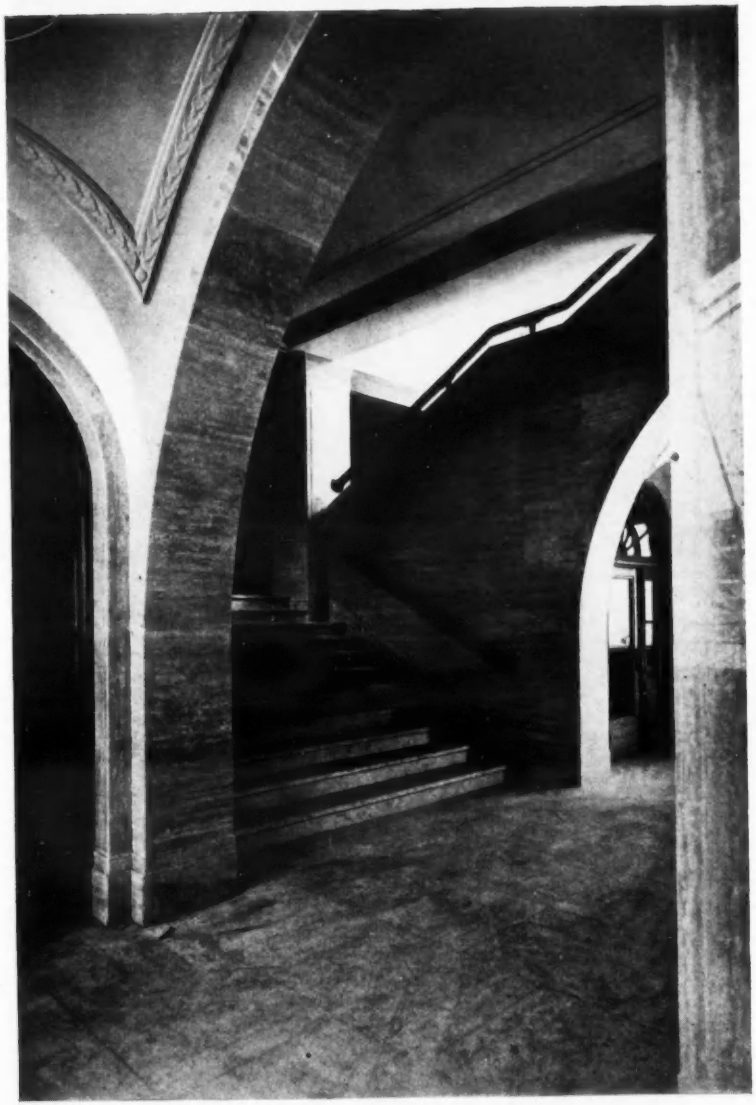
education clerks. On the second floor are the borough engineer's department and spare office accommodation; and on the third floor the valuation department, registration offices, general typing room, spare offices, and the caretaker's flat. In the basement there is room for general storage, the electricity cooking demonstration room, electrical substation, and the heating plant.

The approach to the Town Hall itself is through a covered portico, entrance vestibule and spacious crush hall, the walls of which are treated in marble stuc of soft tones. Seating accommodation in the assembly hall is for 929 persons, and there is further accommodation for about 100 on the stage and for 498 in the balcony. The assembly hall is fitted with a spring floor for dancing, and there is ample cloak and retiring-room accommodation on both the ground and balcony floors.

The stage is designed for cinematograph entertainments, concerts and stage plays, as well as for all usual civic functions. Space for an orchestra, sunk below the level of the hall floor, is provided. A modern organ also forms part of the equipment, so arranged that the console can be raised to the level of the orchestra rail. Behind the stage are dressing rooms for artistes, orchestra and chorus. Ample exits permit of the speedy clearing of the building in case of emergency.

BRADSHAW GASS AND HOPE

One of the two subsidiary entrances to the Municipal Buildings. Each has revolving doors and gives access to the corridors and secondary staircases leading to the administration offices of the departments. They are planned one at either end of the main front.

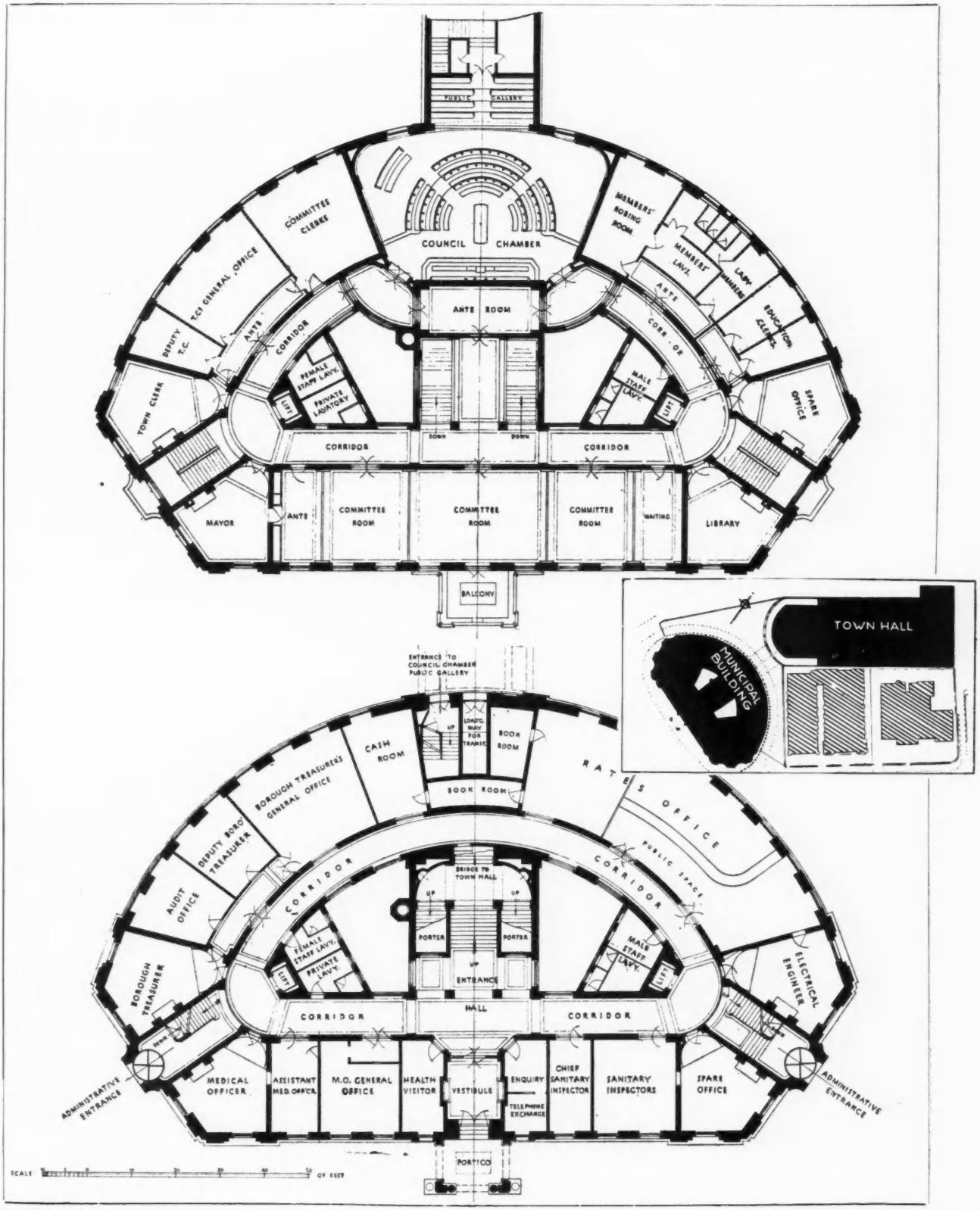


Wimbledon Civic Buildings, S.W.]

Facing the principal entrance to the Municipal Buildings is the grand staircase, the main approach to the council chamber and committee rooms on the first floor.

[*By Bradshaw Gass and Hope.*

The Assembly Hall staircases leading up to foyer and down to crush hall—at balcony—and ground-floor levels. The foyer also connects with the Municipal Buildings.



Wimbledon Civic Buildings, S.W.] [*By Bradshaw, Gass and Hope.*

The Municipal Buildings block : ground- and first-floor plans. At ground level are departmental administrative offices; above are council chamber, mayor's parlour, town clerk's and committee rooms, library, etc. The Assembly Hall block (for plans, see overleaf) is separate, but there is a connecting bridge. The relation of the two is shown by the small block plan inset.

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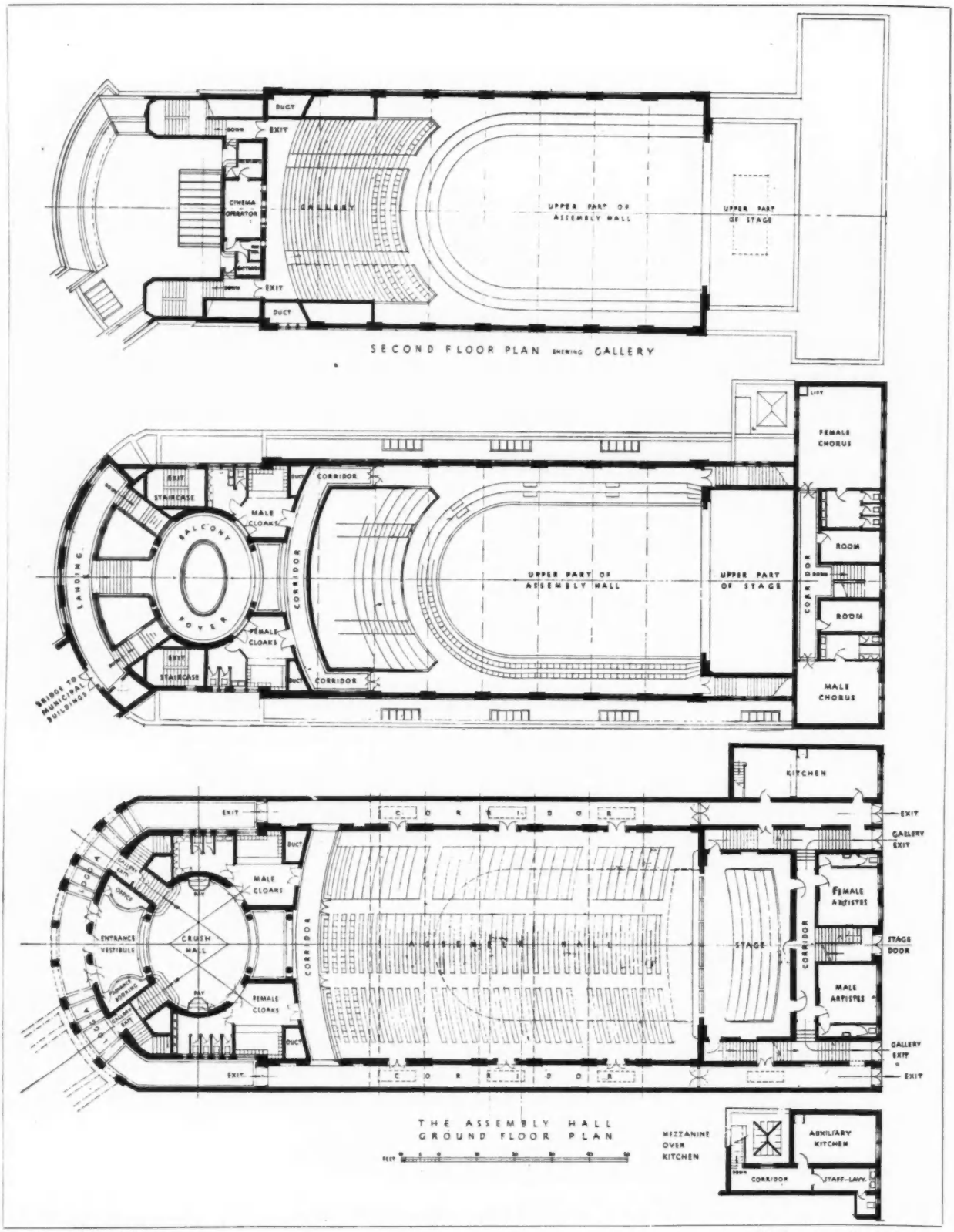


Wimbledon Civic Buildings, S.W.] [*By Bradshaw, Gass and Hope.*

The Assembly Hall block : ground-, first- and second-floor plans. The many-purpose hall occupies all three floors. Near the stage and green rooms is provided a kitchen, with a mezzanine auxiliary. Public entrance is at the other end. Here are vestibule, crush hall and ample cloakrooms, etc., embraced by a loggia connecting two flanking corridors—an arrangement repeated above.

The main north front; the central door admits to an entrance hall, and thence, by half-doors, either side of an inquiries desk, to the general office. The walls are of brick, and the dressings of reconstructed stone.

SALT UNION
Stoke Prior, Worcestershire
DESIGNED BY C. F. LAWLEY HARROD

THE new office block for the Salt Union, Ltd., has been erected on a site outside the works, facing the main entrance, and completes a scheme of improvement originated some years ago. The building faces due north, having a frontage of 150 ft. by an average depth of 40 ft., and provides for a lofty and spacious general office, extending through two floors, necessary private offices and a caretaker's house. It is set in suitably laid-out gardens.

The outside walls are faced with rustic multi-coloured bricks, with dressings of reconstructed dragged surface Weldon stone. The main entrance doors are placed in the centre of the north front and give access into a marble-floored entrance hall. Inquiries are made at a counter which separates the entrance hall from the general office.

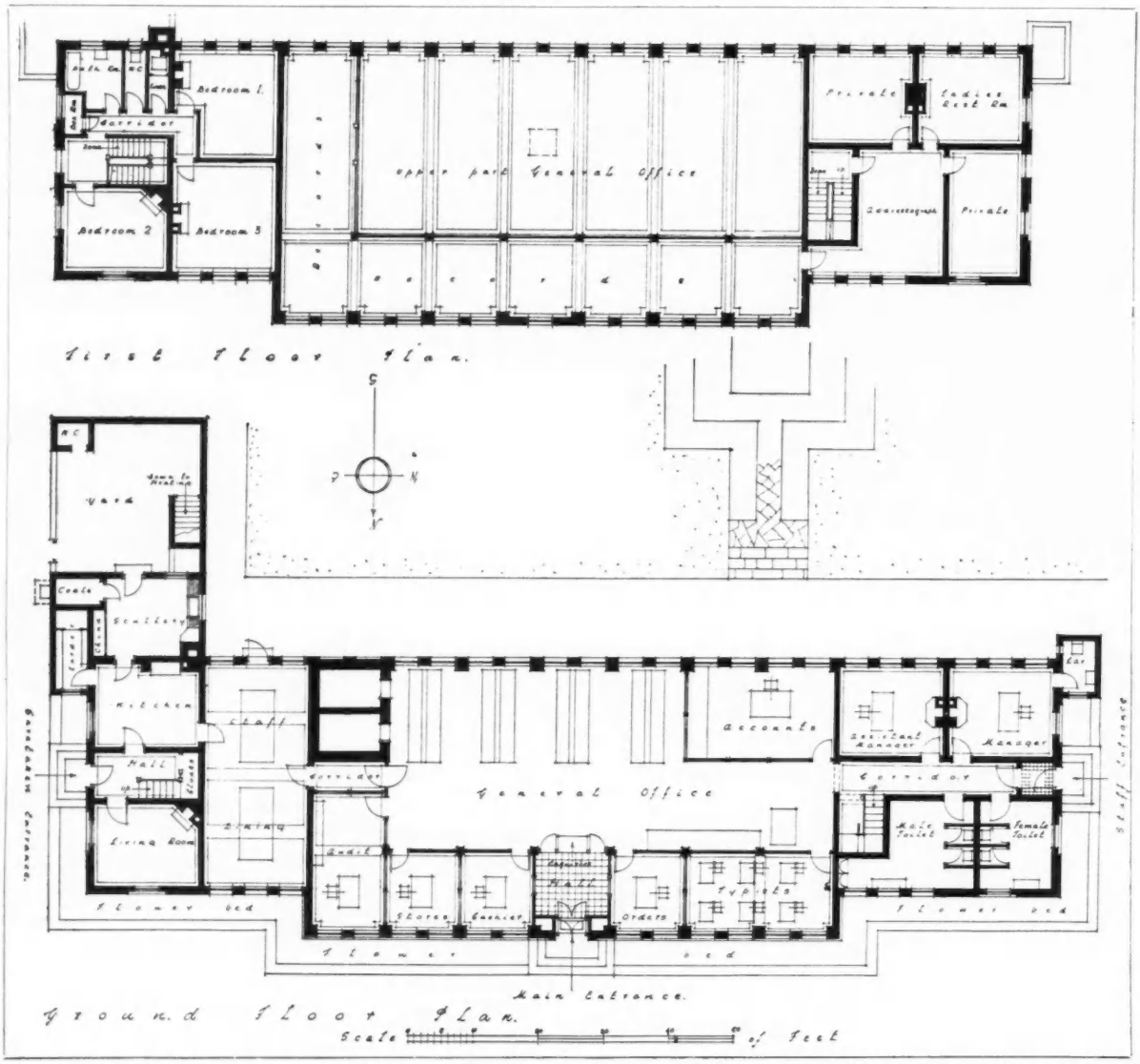
The general office is 80 ft. long by 40 ft. wide by 20 ft. high, and is lighted by high narrow windows in the north and south walls. The private offices, having communication with the general office, are placed along the north side, a gallery being formed above to serve as a storage place for records.

The staff entrance, which is at the side of the building. The bricks are rustic multi-coloured facings.

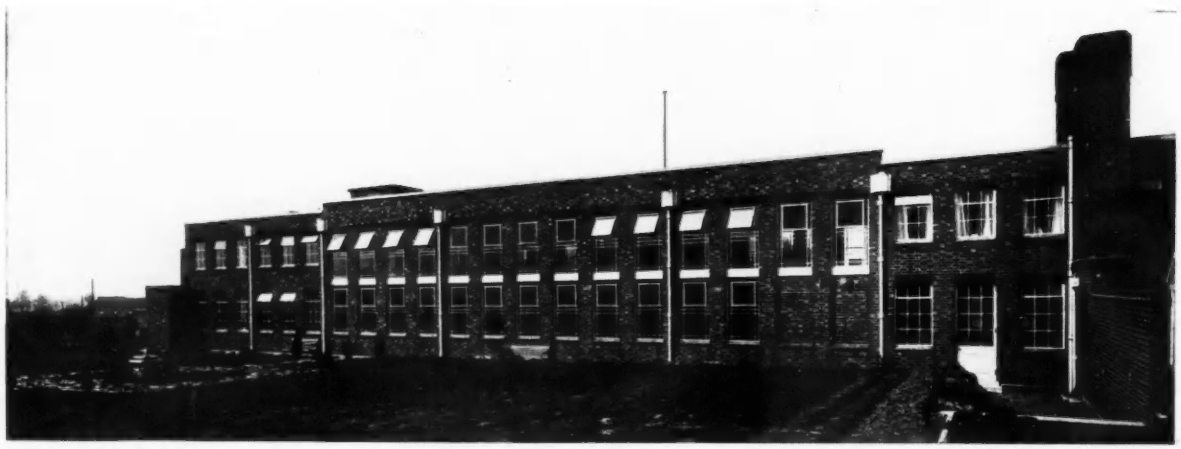
On the east side of the general office block are placed the caretaker's house and staff dining-room; and on the west side the staff entrance, toilet, and managers' private rooms.

The walls are finished internally in sanded face plaster, coloured dove-grey, the ceilings being finished broken white. The joinery and fittings are in mahogany. The floors generally are finished in wood blocks, and the windows glazed with Vita glass. The caretaker's kitchen and lavatory blocks are tiled from floor to ceiling, the floors being finished in red quarries with cove skirtings.

The artificial lighting is electrical, the diffused bowl system being employed; and the heating is by low-pressure hot water.

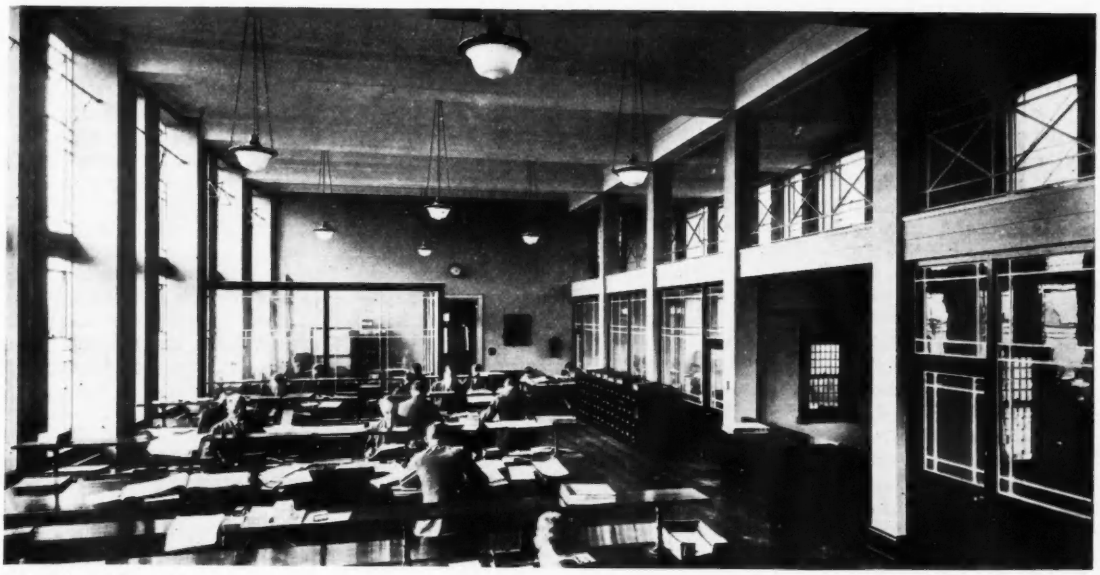


The ground- and first-floor plans. The former provides general and managerial offices, the staff dining-room and adjacent kitchen, which dovetails in with the caretaker's house. This has a separate entrance, and, on the first floor, three bedrooms and bathroom. The upper floor is largely occupied by the lofty general office, but also contains a ladies' rest room and two private rooms.



Salt Union Offices, Worcs.] [*By C. F. Lawley Harrod.*

The south or back elevation. The caretaker's house occupies both floors of the nearest end of the building. Here, too, is the heating chamber. The deep windows light the large general office.



Salt Union Offices, Worcs.] [*By C. F. Lawley Harrod.*

The general office, showing the entrance hall and inquiry desk on the right. The accountants are accommodated behind the glass screen seen on the left. The doorway in the far wall leads to the managerial rooms.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: xxii

THE FUN OF THE FAIR

BY KARSHISH

(H. B. CRESWELL)

I HAVE said that it was my wife's education of me in the springs of human motives, and particularly her wholehearted efforts to advance me by intricate social manœuvrings, which, more than any intrinsic capacities in myself, established me in practice and gave me an entrenched position in life. I have instanced some matters in which Nancy put me wise; and I will now say something of the social game—as I will call it—for I believe this social game to be indispensable for success to all except the most exceptionally gifted among architects; and that, even of these, the number who accomplish their ends in the obscurity which is possible for the painter, sculptor, musician and author, is so small as to be negligible. Even Philip Garston, who never moved a step aside from direct accomplishment, or was actuated by ulterior motives, was inevitably drawn into the vortex of social life; and his success owed not a little to the notoriety of his outstanding personality.

Garston never played the social game or gave it a thought, and was so searching in his ridicule of my exploits in it that I left off speaking of them; yet I secretly envied his independence of thought and spirit with an envy which I have since fully justified in myself, for the social game imposes on the adept a crafty, insincere, circumspection in his actions, in his relations to persons, and in his attitude to events: his deportment of mind has at all times to be a falsity. He must sacrifice acquaintances and even friends, and forswear his convictions, in the cause of a diplomacy of which the ends are contemptible and the means to them degrading.

The game, when played devotedly, so that it becomes a habit of mind, is demoralizing. Men or women who are always "out for blood" become so deformed in nature that—as I have observed—their ambitions for their children even become vile. They lose touch with all that is human in life; become deserts to all men of generous impulses; and I am convinced that their pursuit of contentment is as hopeless as with those who make avarice their god.

I can speak with confidence of the social game, for I have played it; but Garston was wrong when he told me, brutally, that I was "one of the great Tom-cats of architecture that rub themselves against the legs of all who can advantage them, and arch their backs at everyone who can't": I was spared any such fate because, though Nancy played the game earnestly, she never played it seriously. It was, with us, always a game and nothing but a game—an affair of moves and countermoves; and though I was often humiliated or angered by a snub or a rebuff, Nancy never was so, but laughed and set about devising new schemes for assaulting the old stronghold or reducing it by advance in a new direction. We often used to invent plans of action as we lay chuckling together in bed, and the rapid growth of my practice rewarded the trouble we took, but, looking back, I realize that in those days my social designs were a greater preoccupation with me than my architectural.

Nancy, however, well understood the surrender involved by all this. Once, after we had been laughing together over a petty discomfiture we had dealt an opponent, she broke off with a sigh: "You know, Pidge, some day when your ship really comes in we must get out and away from all this."

I only perfectly understood all that had been in her mind when she said this, after I was forty and she dead, and the war had come to teach many things: for so it is, that a man takes colour from the life in which he seeks to establish himself; and so it is that generally-accepted ideas are commonly wrong-headed, that men who are observers of life and not mere participators in it are always in a minority, and that the generality are always wiser and better than the institutions they serve.

The social battlefield of Nollingborough and its neighbourhood was much the same as that of many other small country towns. As has been said, the Nollingborough *mêlée* was centred in the Rectory circle, that of

the neighbourhood in families classified as " county," and in the big-wigs of the hunting fraternity. The combatants were uniformly armed by power of peck; and the pecking order was matter for unending contest. I was hard put to it to win what I considered to be my rightful place in that order, for I had to work my way up from being classified as " a young man in the Steel Works," and to combat the implications of ignorance and low birth which naturally attached to anyone reduced to practising as an architect in such a place as Nollingborough.

In these struggles I received many pecks so shrewd that I wince to remember them : the pecks I gave I have for the most part forgotten. If in what follows I describe the sufferings of a thin-skinned snob, I can only say that such a thin-skinned snob was I; I do not ask for sympathy but for attention only, and the point for note is that though these assaults are remembered because they particularly caught me on the raw or otherwise distressed me, they were in kind, though not in degree, typical of the give-and-take of my daily life.

When, before my marriage, the great Archdeacon, the Rector of Nollingborough, honoured me with his recognition—my father was by that time a well-known ecclesiastic—he did not call, but sent me his card in an unsealed envelope by the halfpenny post. It is true that I lodged at a farm, up a by-road, two miles from the rectory; but this bland assumption of patronage and condescension cut me to the bone : it first crushed me with humiliation and then made me boil. After I had boiled over I boiled down. I did not return the compliment by post—as Garston would certainly have done — but swallowed my humiliation and left my card in person; and it was lucky for me I did so, for the invitation to help in my famous bazaar followed.

A year later, I lunched alone with the Archdeacon and, apparently, he thought that I was in danger of being too much honoured unless he gave me a peck before parting, for after we went to his study for coffee, with great zest he selected a cigar for himself from a box on a side-table without offering one to me or—of course—asking me if I smoked. I have never forgiven him this peck. I could not leave, as some bazaar business had to be discussed, and he made me feel that my poor little return peck of filling my pipe and then asking him for a light, had quite missed the mark.

These examples may seem instances of very bad manners; no doubt they were so, but they were the actions of one who knew what good manners were, and they were designed to humiliate. I often suffered even more when no peck was intended, for a slight is the worse when it appears that the slighter judges the slighted not to be in a position to feel any slight.

When I rebuilt Tamberton Manor for the Marquess of Goulash I was often made to suffer acutely in this way. Goulash was always frank and cordial to me, with an ease of manner and considerateness which banished any sense of inferiority of station. It is second nature in men of high rank to condescend gracefully; but Goulash, even to my sensitive perceptions, never in the least seemed to do so, although it was made clear that he was himself extremely sensitive to recognition of his rank.

Once, after the family were in residence and I had gone to the house on some business and parted with him and Lady Goulash in the garden, he whistled to my retreating back as I crossed the lawn and said : " Have some tea ? We're just going in."

I was hurt by his whistling to me. I felt he would not whistle to an equal. Then, it seemed to me that he would not have whistled if it had occurred to him that I was *not* an equal—I do not mean in rank, but socially equal, as all gentlefolk essentially are. The point worried me, and I have not settled it to my satisfaction even yet.

On another occasion we had a kind of contest when he took me into the house by the tradesmen's entrance. He did not take off his hat, so I did not take off mine. He kept his hat on when we went into the kitchen : I was not going to honour his cook and kitchen-maids by taking off mine, but I could see he noticed this and thought I was assuming too much, or, for some other reason, he disapproved. We passed towards the front of the house side by side : no word passed, and there was distinct tension in the air. When we went through the door into the hall he still kept his hat on, but I, with a certain repugnance, took mine off. The tension at once relaxed, but I was hurt that Goulash should continue to wear his hat when we were together in the library. He certainly would not have done so with a guest who had uncovered. I had no doubt that he acted in this way deliberately, as a final flourish or gesture of putting me in my place.

I had had a very awkward moment with my hat the year before, when the house was rebuilding and lunch was laid out in a room of the coachman's — unfurnished — cottage. The Marchioness and her sister were in the room, and when I entered I took off my hat; but as Goulash continued to retain his, I, after a quarter of a minute, put mine on again and discarded it only when he led off sitting down to table. The matter was to me of enormous importance then, and it seems so now.

Nancy, before I married her, hunted; and though she was in no position to entertain, she was a favourite with the jolly sporting fraternity, was often mounted by friends, and had a large circle of acquaintances. Her position in the pecking order was therefore far above mine, and she had none of my sensitiveness, for, though her perceptions were far keener, the heaviest pecks left her unmoved and she was able to give as good as she got.

She explained to me that it was a rule of her game to antagonize those with whom she failed to get on a satisfactory footing : " For," said she, " everyone will respect you whom you can make afraid of you; and it is much better to be abused than ignored by any particular person, for few old friends will think the worse of you, and you will find new ones among those who dislike your opponent." I remember a good instance of Nancy's methods when hard-pecked.

There lived, a few miles from Nollingborough, a very great lady and a very great snob, a certain Mrs. Archer Pitt, whose social position had been made unchallengeable by the circumstance that she had entertained R–y–lty. She was so well connected that she lost nothing in being without a title; and she completely cut the ground from under the feet of those who might sneer at the origin of her husband's riches in a Britannia-metal manufactory, by calling him " Spoon."

Nancy was one of hundreds asked to this woman's garden party, but—apparently—Mrs. Archer Pitt did not know Nancy by sight; and as a result Nancy, in a stationer's shop, was—apparently—quite unaware who Mrs. Archer Pitt was, when that lady came in and occupied it. These little exchanges were like passing the time of day with us, but Nancy's peck must have been even better than she knew, for one evening, a short time afterwards, the great lady sent her butler four miles to our house with an oral message to Nancy that Mrs. Archer Pitt would be obliged if Nancy would cease to employ as seamstress a certain woman in the village, as *she* was doing all that was necessary for the person in question.

Nancy sent a note back by the butler, in reply :

DEAR MRS. PITT [no " Archer," observe; a heavy jab !]

Thanks so much, and so kind of you, for, of course, you know so well what is necessary for these people.

What an agreeable man Mr. Bates is; it was nice of you to let him come, and I am *greatly* interested in your new sink. Mr. Bates thinks ours

will do for the present—though you would be *much* more particular, I expect: however, I must write no more now, as he is waiting.

Yours sincerely.

Mrs. Archer Pitt got all she wanted that time, I fancy; and she and Nancy thereafter kept at opposite ends of the social hen-run; but where Nancy scored was in keeping a copy of this letter to point a good story for her friends, some of whom amused themselves afterwards by mentioning Mrs. Bernard Whistlow to the Great One for the pleasure of observing contortions of dignity in contest with exasperation; for, of course, Mrs. A. P. knew that the story was abroad.

It may be wondered what all this has to do with the building up of an architect's practice; but this will be clear when I say that such episodes flood my memory, and that they were salient combats in a general engagement which involved us on all sides every day of our lives. For a man to have any importance as an architect in the provinces, or to be conceded any skill or merit among those who are in a position to establish his reputation, he must attain a social position which allows him to mingle with the "best people" and causes him to be envied and pursued by those who are lower down in the pecking order.

For every commission I won from my connection among influential people, I gained half a dozen from those who sought me merely because I was socially more successful than they were, and therefore made contact for them, so to speak, with glories they aspired to but could not reach.

Nancy, as I have said, played the social game as a game only; but even so it was an arduous and demoralizing preoccupation, as I came to know only when—as was to happen—I found myself forcibly enlarged from it.

Two years after our marriage we took the risk and moved into a larger house so that we could entertain. This was no less than a gamble in which we staked the whole of our joint means; but, as Nancy foresaw, the speculation proved a sound one: my earnings increased rapidly. The game, however, was not worth the candle. It is no pleasure to entertain—to give dinner-, garden- and bridge-parties—when you dislike or distrust most of your guests, are bored by many others, and have no other purpose than to gain social weight. Nancy made light work of it all, but it was an anxious task laying our schemes and devising our snares; and the strain of playing up to the mark we had set was great, and we commonly saw the back of our last guest with a groan of relief.

One constant source of stress for me was that I could not get away from people: at any moment I might run into somebody unexpectedly and have to adjust myself to the needs of the game; to be warm, indifferent, ingratiating, or prepared to snub, with recourse to refinements of great complexity and the exercise of nice judgment.

This lady had behaved in an offhand way to Nancy a week before, at the house of a woman whom she was jealous that Nancy should be received by: I had either to let her suppose that I set no store by her social pretensions and so make her have a higher opinion of our position, or, by making myself particularly agreeable, flatter her into thinking we set a high value on her acquaintance; and which to do, and how to do it, was a teasing question, and a delicate job. One had to feel one's way or one might take a peck as a reward for not giving one.

That man had on a late occasion threatened my dog, which had approached his, and his manner had showed a disregard for what I held to be my social importance, for my house was as big as his and I entertained more and knew just as good people: how should I greet him so as to re-establish myself? I might be snubby and leave it to him to realize he had over-stepped the mark; or flatter him by appearing to swallow the small affront; or boisterously chaff him as though I were overlooking the bad manners of one whose acquaintance I did not value.

Nancy gave pecks on my account, and I on hers; and she lavished her charms so that she would have plenty of ground to work on by withholding them. We discussed our most trivial social interchanges daily and fortified ourselves for future conflict. I remember that a wretched little woman—the wife of the master of a private school—had the effrontery to ignore Nancy because she was in the glory of public conversation in the street—probably on some parish business—with the Rector of Nollingborough. Next day I met her and cut her dead: my peck so disconcerted her that she became crimson and fell off her bicycle.

NEXT WEEK—XXIII: THE SWORD FALLS (AND CONCLUSION).

The previous instalments appeared as follows:—

May 27.	i:	I am Articled.
June 3.	ii:	Episodes of Pupilage.
June 10.	iii:	Episodes of Growth.
June 17.	iv:	My First Job: The Sewer.
June 24.	v:	My First Job: The "Pipes."
July 1.	vi:	I Turn Clerk of Works.
July 8.	vii:	Bradshaw & Son: Builders.
July 15.	viii:	Joe Richards: Foreman.
July 22.	ix:	Trials of a Clerk of Works.
July 29.	x:	A New Venture.
Aug. 5.	xi:	The Resident Architect.
Aug. 12.	xii:	An Architect's Early Gruel.
Aug. 19.	xiii:	An Uphill Fight.
Aug. 26.	xiv:	A Disaster.
Sept. 2.	xv:	The Law's Majesty.
Sept. 9.	xvi:	A Failure and a Success.
Sept. 16.	xvii:	Private Practice at Last.
Sept. 23.	xviii:	Provincial Practice.
Sept. 30.	xix:	Forging Ahead.
Oct. 7.	xx:	An Architect's Wife.
Oct. 14.	xxi:	I Quarrel With My Partner.

NEW MATERIALS ISSUE

The Architects' Journal for November 4

ON November 4, 1931, a special issue of THE ARCHITECTS' JOURNAL devoted to the New Materials will be published. It will be a specially-enlarged number, taking a comprehensive view of the ever-increasing range of building commodities available to the architect, particularly for decorative purposes.

In addition to the usual current features, the following eminent authorities will contribute illustrated articles on the subjects indicated:

MATERIALS FOR ARCHITECTURE

A general introduction to the number, by Wells Coates.

PLYWOOD, LAMINATED BOARDS AND VENEERS

Their manufacture and decorative possibilities, described by J. Murray Easton.

MODERN SYNTHETIC FACING MATERIALS

Notes on glass, ceramic tiles, cellulose compositions, synthetic stone and marble, etc., by Raymond McGrath, a pioneer in their utilization.

THE NEW METALS

The stainless steels; copper, bronze, nickel; the aluminium alloys; electroplating in various metals; by Alexander H. Hayes.

MODERN FLOOR COVERINGS

Terrazzo, marble, asphalt, manganese compounds, rubber, parquet, linoleum; by Ll. E. Williams.

MODERN WALL BOARDS

The characteristics of the multitude of synthetic products available today; by Frederick Etchells.

MODERN PAINTS AND DECORATIVE FINISHES

Cellulose, metallic paints, plastic paint, distempers: their capabilities and methods of application, by spray or hand-painting; by Harold Tomlinson.

NOISE AND ITS ABSORPTION

Acoustic complaints and methods of combating them; by Hope Bagenal.

For this occasion only the customary supplement plates are not being printed separately, but are being increased in number and bound into the body of the JOURNAL.

LETTERS FROM READERS

Art and Industry

SIR,—The question of the obtaining of suitable fittings and finishing items for a job is really the choice of a suitable manufacturer. Personally, I find the big firms almost impossible: one's ideas have to pass through sundry executive limpets before they reach the real craftsmen. With a small firm, however, one can get down to it with the man who is going to make the things and, consequently, can evolve suitable articles with one's ideas and his help. There is no dearth of good craftsmen who can make practical the vaguest designs, and it is only by keeping designs vague that reasonable work can be done.

The architectural designs for furniture, handles and such items, that are drawn to scale on paper and sent to be executed, are hardly ever worthy of notice, as they invariably have a sort of art-and-craft heaviness. This work can only be done by the specialist.

I have found that even if one employs a sculptor to model a door handle, his method of meeting the wood has to be re-treated; as he carries his moulding a practical man has to finish it where its fixings come. BASIL IONIDES

SIR,—Your correspondent, W. A. R. Stringfellow, is evidently not fully aware of the conditions in the design departments of the majority of those manufacturing firms which keep a staff of designers.

The fact that in many cases the chief of the firm "has no idea of the meaning of modern design" may be perfectly true, but it also follows that if he, on the one hand, either rigidly adheres to "period," old-fashioned and well-tried types of design, or if, on the other hand, he ventures to try what he considers is "modern," by copying "the worst of crude French design," the designers in his design department have no earthly chance of showing whether they themselves understand and can produce modern commercial design or not.

It is therefore obvious that their school of art training—if they have had any—cannot be blamed for that.

I know brilliant young students who could produce anything equal to the Continental designs for which W. A. R. Stringfellow professes such an admiration, were they given a chance. Unfortunately, in order to earn their livings and keep their jobs, they have to continue producing for their employers designs which they as artists call pure "tripe." Any suggestion of originality or modernism or fine colour may endanger their posts, and in these times the risk of losing a designer's post is too great.

Again, I know firms which pay for a weekly bundle of sketches, photos, colour reproductions, etc., of almost any conceivable type of work to be sent to them from Paris by an agent, who does nothing else but collect these Parisian crudities for his clients. Parts of these designs, whether appropriate or not, are then selected and worked up into "modern designs." What can a young designer do under such conditions if he dare not lose his job?

This is not the fault of the schools of art. All this is done in spite of their efforts, and it is the chiefs and the retailers who are at fault for demanding this type of work from the designers.

It may also surprise your correspondent to hear how some of the trade designers are recruited, and that they may not have entered a school of art at all. Is he aware that in many large firms designers are not specially recruited or selected from those known to have some artistic ability?

Actually, in many cases, they are engaged straight from the elementary school, without even the culture of a secondary school, and they are then set to work as paint grinders, errand boys, shop-sweepers, and given other menial tasks. In time, if there is a vacancy in the design room, they are brought in as required, to fill in outlines with paint, etc., and eventually, if neat and tidy, they may be promoted to the actual design work.

Some of these boys may be sent in the evenings after a long day's work, and when they are hardly fit for serious study, to the nearest school of art, but in many cases the boys have small natural ability, and it is possible to teach them very little; and very few could appreciate the finer considerations involved by the study of the contemporary design of today. One cannot blame the schools of art for the material that is sent to them.

Careless recruitment for the art industries is at the bottom of many of our troubles, and manufacturers would do their firms a real service if they in future made reasonably certain that those whom they engage come to them with some sort of guarantee of ability, and that they have been tried out to some extent by attendance at an art school. Employers have said to me: "I like to take them straight from school at fourteen, and then I can break them in as I want them." Unfortunately, this is a wasteful method, as one manufacturer admitted to me that not one in six turned out well enough to be worth keeping, and certainly not worth putting into the design department.

Manufacturers must realize that they cannot have it both ways. They must either engage a really first-rate artist designer and take their courage in both hands, and trust him to do what he knows is right, as the Swedes have done with such conspicuous success, or pay more attention to recruitment and allow time off for their designers in the day-time to attend the school of art, or even to have organized trips to see such exhibitions of sound and modern work as may be available. It is the widening of the outlook which is so difficult. The art teacher himself, owing to the usual conditions of his appointment, has too little opportunity of getting up to London even from the provinces, and an occasional visit to the Continent is almost beyond his means.

I welcome W. A. R. Stringfellow's suggestion that "some weeks in every year should be spent in visiting the various guild centres throughout Europe," and as one who has occasionally been able to do so, I can most heartily endorse his opinion of the value and stimulus of such visits. I wish it were possible for this idea to become a part of the art teaching system for art industries, but it is so largely a matter of finance that I fear that little can be done, except by the visits of individuals at present.

I can assure W. A. R. Stringfellow that if he can hold a similar exhibition to that which he has mentioned, either in Leeds or Bradford, there would be no lack of interest. I can guarantee that more than "three students" would attend from the local schools of art.

DOUGLAS S. ANDREWS

Beguiling the Visitor!

SIR,—Karshish's hero's trick of carrying a roll of drawings reminds me of a flourishing architect in my student days. He had a collection of envelopes addressed to the Prince of Wales, the Archbishop of Canterbury, the Prime Minister, etc., and they were spread rather ostentatiously on his desk when a visitor arrived.

S. B. CAULFIELD

R.I.B.A. SCHOLARSHIPS

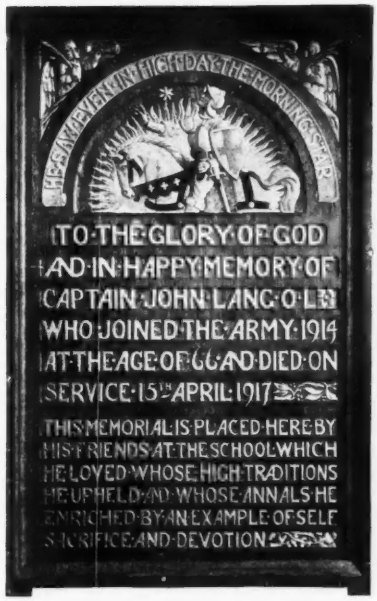
The R.I.B.A. announce that the following scholarships, each of £100 a year, have been renewed for a further period of one year: Mr. Hubert Bennett (School of Architecture, University of Manchester), Mr. Ralph Dickinson (Birmingham School of Architecture), Mr. F. W. Wright (Department of Architecture, University of Sheffield).

The Artists' General Benevolent Institution Maintenance Scholarship of £100 a year has been awarded to Mr. M. G. Gilling, of the Liverpool School of Architecture, University of Liverpool.

The Ralph Knott Memorial Maintenance Scholarship of £45, tenable at the Architectural Association School of Architecture, has been awarded to Mr. C. L. Sjostrom.

THE WORK OF SIR ROBERT LORIMER:

REVIEWED BY P. M. STRATTON



Three examples of oak war memorials designed by the late Sir Robert Lorimer.

THE work of design is under constant threat of dwindling into a game of Patience, where the player continues to turn up one card after another, and either fit them all into the required sequence or abandon the game. A great deal of present-day English work is a play game of this sort. An increasing amount of foreign modernist design gives no higher satisfaction than a Patience table when the cards have come out. The directly creative mind is so rare that a man like Sir Robert Lorimer has an importance out of all proportion to the amount of his work, and even to the quality of it. He becomes an incentive to countless individual efforts.

Mr. Christopher Hussey, in what is the most interesting part of his book, discloses the sources of Lorimer's inspiration. First, "he loved his country, his work, and the things with which it brought him into contact—rough stone and sweet-smelling wood ... the result is that the buildings live." During his boyhood his home was Kellie Castle, an old secluded stronghold in Fife, which his father restored. To young Lorimer it was a place nearer both enchantment and reality than Edinburgh, and it was haunted by kind masons and carpenters, who taught him the feel of materials and tools. Kellie made him an architect. He was apprenticed to Rowand Anderson for four years, and learnt the grammar of Gothic. He then passed to Bodley's office for eighteen months, and came under the influence which was strongest after Kellie, for he entered into the life of the arts and crafts movement at its centre, and grasped the management of colour and texture, and the meaning of the individuality of substances. By the time he left Bodley's he had made his soul as an artist.

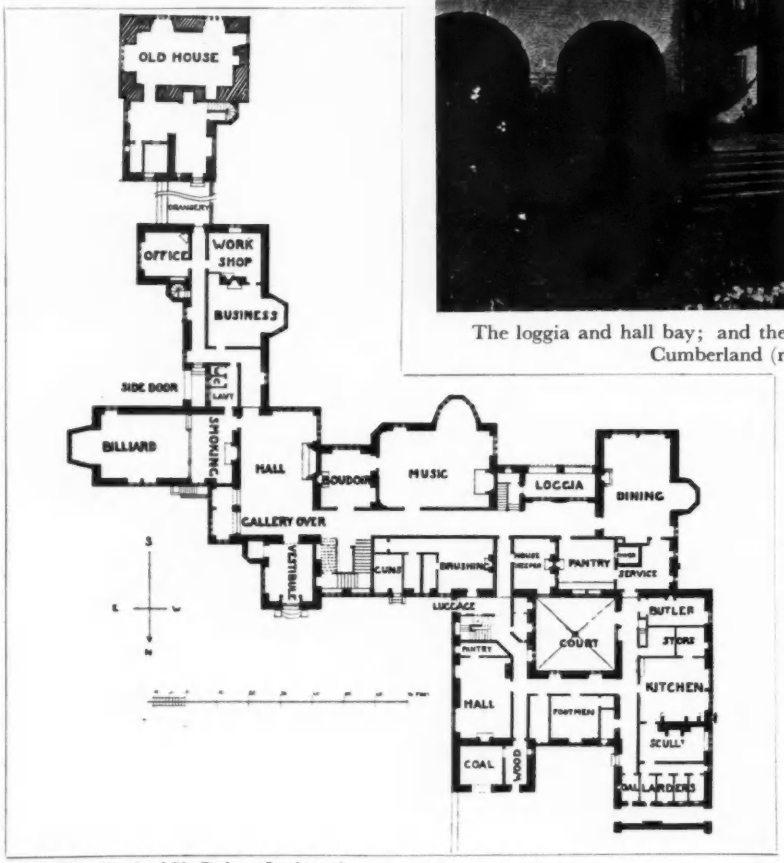
His work, as Mr. Hussey shows, can be best divided, not chronologically, but into types—restorations, the English manner, Scottish houses, ecclesiastical and civic work, war memorials, crafts. But in this division there is much overlapping. Dunderave, for instance, he not only restored, but added to: a grim old castle on the shores of Loch Fyne, L-shaped on plan like an arrowhead, five stories high, crowned with steep roofs and stunted chimneys; this compact engine of war has all its character accentuated by the low horizontal masses of Lorimer's building (see page 535), planned to enclose a courtyard behind it. Within the new rooms are charming plasterwork by Thos. Beattie and Sam Wilson, and delicate bird's-eye maple panelling—these rooms are each of them separate works of art, as it were gifted children in one family.

So also Lorimer's English work includes Lympne Castle, which was to some extent a restoration; and Brackenbrough in Cumberland (see page 534). The latter work necessitated a long spreading plan entirely different from the close order of the Scottish large house. All the effects of light and shade have been set to amuse: the interminable fronts and incidents flow one out of another as in a picaresque novel; at the same time a general low skyline rules in the design. The detail of this work shows the Bodley influence before it had been finally incorporated in Lorimer's mature style. Hence, the church he built at Aldershot (see page 536) as late as 1926, is much more mature and individual. The intrinsic beauty of English bricks (the reds and the greys) is realized in a design proper only to brickwork, and the weaving of verticals and horizontals into a homogeneous plaid shows a rich and ingenious mind. Within, the dainty austerity, like grey clouds on snowy hills, fits the Scottish nature at its religion. For this interior is a frozen version of the St. Peter's Roman Catholic Church in Edinburgh, built in 1906-8 (see frontispiece to this issue). There are the same white arches and wagon-vaulted roof: in the earlier case the roof is a richer tint, the basilica is

The Work of Sir Robert Lorimer. By Christopher Hussey. London: Country Life, Ltd. Price £3 3s. net.

A view of Dunrobin Castle, Sutherland, from the east (reconstructed 1915–19). Whilst occupied as an Auxiliary Naval Hospital in June, 1915, fire broke out; this was confined, however, to the compartments added to the castle by Sir Charles Barry between 1835 and 1850. The old part of the castle is perched on a steep declivity overhanging the sea. It is claimed to be the oldest house in Scotland continuously inhabited, and there is little doubt that the keep was originally built about 1275 by the first Earl of Sutherland.

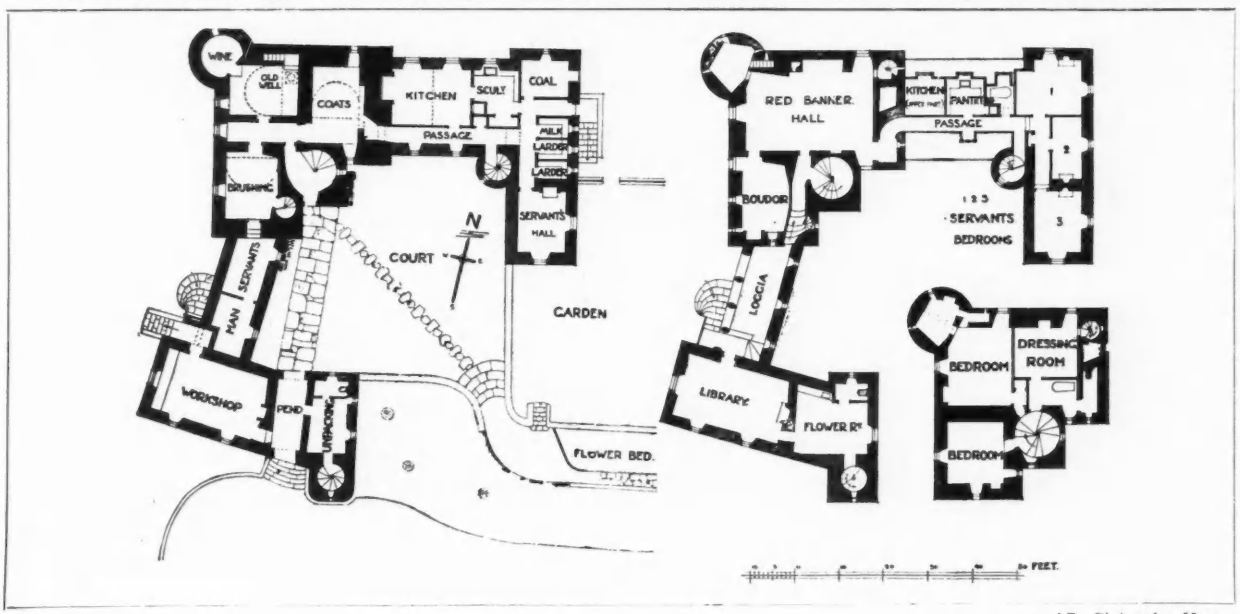
The loggia and hall bay; and the ground-floor plan of Brackenbrough, Cumberland (reconstructed 1903).



From The Work of Sir Robert Lorimer.]

darker, and the whole is furnished and vivified by the crowded sanctuary. It was in the Thistle Chapel, 1909-11, and the Scottish National War Memorial, 1924-28, that Lorimer found his fullest expression—both works so well known and illustrated that there is no need to reproduce any of Mr. Hussey's excellent photographs. As he says, the War Memorial is open to criticism in the mingling of motives and styles, and yet, thanks to Lorimer's overpowering personality, it achieves unity and success, and was greeted by "the explosion of public praise and popular enthusiasm." Of Lorimer's minor war memorials there are endless examples, and those shown on page 533 give some idea of their variety; each was a different and a separate creative act.

Dunderave Castle, Argyll (reconstructed 1911–12), showing in the foreground the new buildings added by Lorimer.



[*By Christopher Hussey.*

Dunderave Castle: ground- and first-floor plans. In reconstructing the castle, the architect's problem was to provide a suitable kitchen wing and additional sitting-rooms without dwarfing the original tower (see photograph above). He had recourse to the method employed frequently in the past, namely, to convert a tower house into a courtyard house by the addition of low outbuildings, some of which should act as a gatehouse to the court.

St. Andrew's Presbyterian Church, Aldershot (1926–27) : one of the few buildings for which Lorimer used brick externally.

From The Work of Sir Robert Lorimer.] [*By Christopher Hussey.*

The interior of St. Andrew's Presbyterian Church, Aldershot, looking towards the Sanctuary. Note the coffered wagon-roof.

SOCIETIES AND INSTITUTIONS

Architecture and Decoration

Following are some extracts from the paper on "Some Opinions upon Architecture and Decoration," read by Mr. H. S. Goodhart-Rendel, F.R.I.B.A., at the Royal Institute on Saturday last.

I MUST beg those to whom "period" decoration seems a very dead horse to be patient while I remonstrate with those who may believe that something can still be done by flogging it. After all, it sounds plausible to ask, as many people do, why one should invent something that may be bad, when one can copy something that is good? It is no real answer to this question to say that copies are usually failures, since they can be indistinguishable from originals. It is also not a complete answer to say that copyism is unprogressive and cowardly, since a great many people resist progress and euphemize cowardice as "safety first."

To argue that the process of copying sterilizes artists and craftsmen carries little weight with those who consider that the crying need of modern art is birth control. To ask how to decide what to copy—ah! that gets nearer the true confutation: let us press that question home—when you say "Copy something that is good," what do you mean by "good"? Unconditionally "good" in all surroundings? Is there any such thing? Good as a background for your life, in spite of its having been made as a background for lives quite different from yours? Are you sure that that background won't make you look rather silly, or, shall we say, a little inconsequent? As good in combination with your modern clothes and gestures as it was with those of the people it rightfully belonged to? Is not that asking too much of even the most adaptable decoration? Well, good enough, then; it may or may not be good enough for many people; but those people have no reason to think very well of themselves.

Not that the uncompromising modernist has all right on his side. Novelty must be naturally generated—it cannot be made by a mere effort of will. Doing what nobody has done before may be only doing what nobody has been fool enough to do before. Our habits, our clothes, our speech, our very thoughts, are all composite of old and new, and will accord no better with exclusively new surroundings than with those that wholly imitate the past.

Because "period" decoration is no decoration at all, but merely a vulgar substitute for it, it does not follow that true decoration can have no style.

The better tendencies in the art of our day lead toward extreme economy of means. We suspect, often with justice, those who habitually use forms rich in associations, such as pilasters, pediments, traceries, crocketings, of greedy insensitiveness, of biting off more than they know how to chew. There are, however—and let us hope there always will be—some designers capable of handling the full architectural orchestra of traditional instruments with originality and mastery. Their opposites—the designers to whom a panel is licence and a moulding an orgy—are liable to save our pockets by the starvation of our appetite. We ask for architecture and they give us construction; we ask for decoration and they give us disinfection; we ask for furniture and they give us sanitary bins as cabinets and surgical appliances to sustain us when we sit.

I have suggested that domestic decoration is a domestic affair, that most men leave it to their wives, and that the wives select and arrange objects designed and made by other men. Perhaps I should have added then that when there is much to be done the wives are very apt to employ individuals or a firm trading as decorators, for of these people I have something to say. "Decorating," as practised today, is a complex trade, a little like architecture, a little like scene-painting, a little like millinery, a little like collecting, and a little like—decorating. It needs the skill of a draughtsman, an antiquarian, a shopkeeper, a diplomat and a first-class cook. And here I am going to be extremely disloyal to my own profession, and to say that if anybody expects the average architect to be able to compete with the skilled decorator at the decorator's particular game, he will be sadly disappointed.

Those of us who have studied and practised modern decoration know well how much time it has taken us that might equally have been devoted to pure architecture, and I think we should admit that those architects that have not so divided their energies, and that need the collaboration of a decorating specialist, may be anything but worse men than ourselves. At the present perhaps we have the advantage, since competent decorating specialists are exceedingly rare. I think, however, that what we should hope for is not increasing experience of decorating among architects so much as increasing experience of architecture among decorators. That this experience may be operative, also, it may be necessary for decorators to obtain a standing independent from shops with stock to dispose of.

In the opinions that I am now going to offer you upon the actual method of decoration I shall speak less as an architect than a decorator, and I shall therefore begin, as every decorator should, with the proviso that if a new building is in question the architect must be consulted on all points in which he regards himself as interested. This is a matter of policy as well as of courtesy—much better results can be got by architect and decorator together than by the decorator alone: unless, of course, the decorator is called in to correct the faults of the architecture—a painful possibility that delicacy forbids me to contemplate.

The decorator deals with three surfaces—those of ceiling, of walls, and of floor. Of these, the first two can be flat or curved. I do not think that even the most modern designer has yet made a curved floor. Floor and walls will normally be partially covered by furniture and people; the ceiling will normally be visible in its entirety. It therefore seems strange that in a house it is usually the last thing that anybody thinks of decorating. Floors, on the contrary, are apt to be over-decorated, whether by carpets or by patterns in marble or tile.

The first desideratum in the decoration of a floor seems to me to be unity; the second, subordination to the decoration of the walls.

When I said that the first desideratum in the decoration of a floor was unity, I hinted what I now avow—that I do not find any combination of rug and surround so satisfactory as an unbroken surface of one material. In hotels and restaurants this unbroken surface is essential; waiters cannot be trusted not to trip up over the edges of rugs laid across their paths. Although I prefer that the surface should be unbroken, I do not think that the colour should be so.

Before we consider the decoration of walls, we must examine the function that walls have to fulfil. I do not mean structural functions; those are only the concern of the decorator when they call for decorative emphasis, which they rarely do. I mean, on the contrary, the functions of their surfaces in our daily lives. Wall-surfaces make our indoor scenery, and are often required to do no more. They also provide the only vertical plane we have constantly before our eyes, and may be used for the display of things that otherwise must be stored and perhaps forgotten or mislaid. Again, they can give prominence to writings, whether edifying, like mottoes, or cautionary, like "Shut the Door," or "Mene, mene, tekel, upharsin." They can hold up bookshelves; they can provide a field for paintings; they can be dissimulated with mirrors.

Public buildings and the parade part of large houses are in a different case. Here, generally, some architecture will have come indoors, and strictly architectural decoration is too large a subject to be included in this random collection of remarks. It is a subject insufficiently studied nowadays; such intricate problems as the effective application of gilding, or the relations between colour and cast shadows do not seem to be even recognized as existing by the gentlemen who stipple and wipe us into modishness. You may or may not like the elaborate harmonies achieved by Crace, by William Morris, by Professor Aitchison, by Charles Kempe, but I do not think that you can deny that these men possessed professional skill and experience that makes the work of most decorators of today look rather amateurish in comparison.

My list of possible surfaces for ceilings will be a very short one. Stone-vaulted ceilings are too rare to need consideration, but imitations of their surface are fairly frequent in halls and passages. Wooden ceilings are commoner, and have every practical advantage over those of plaster when the construction of the ceiling is wooden too. From the first moment that plaster is suspended over our heads on the customary framework of laths, it is always trying to fall upon us, and not infrequently it succeeds in its aim. Fibrous plaster screwed up in slabs is less homicidal in temper, and for this reason is frequently used. Metal ceilings reverberate unpleasantly, and have not had the success that was predicted for them on their introduction. These are all the ceiling materials commonly available, and among them plaster, with all its disadvantage, holds the day.

I do not pretend to have enumerated all the pieces in the game of decoration, but I have probably mentioned enough to remind you what a complicated game it is. The object of the game is to give pleasure to onlookers, and there are as many ways of playing it as there are players. It is only the inexperienced that fancy it can be mastered by any infallible system; those who have played it longest play it with the greatest freedom.

I shall here offer in tabloid form one or two precepts I have made for myself from experiences of success and failure:

First.—The general tone of the floor must be definitely lighter or darker than the general tone of the ceiling, and the tone of the walls must either be identical with that of one or the other or intermediate between them. If this be a true rule, we shall discover from it that walls either lighter or darker than *both* floor *and* ceiling are inadmissible, and this is my opinion.

Second.—Never forget the colour of the wood your furniture is made of. People generally do. Mahogany is particularly liable to alter the effect of greens placed next to it, and walnut often makes mischief for tawny colours.

Third.—Always foresee the yellowing that oilpaint will undergo from time. Be chary in the use of that house-painter's panacea, the umber glaze, remembering that age will umber your colours still further.

Fourth.—Break down almost every paint you use with a suspicion of black. This sounds like flagrant quackery—and I daresay it is. Nevertheless, I recommend it from experience as a useful precaution against crudeness. If you can see easily that black has been added, you have put in too much.

Fifth.—Never rely on matching up oil and watercolour. If they are alike at first, they will speedily become different.

Sixth.—The one tint that should usually be barred for plain surfaces in a room is that of the ground of any patterned material adjoining them. If this precaution be neglected, the material will lose all solidity of effect, and the plain surface will look poor by the side of it.

Seventh.—Pick up the colour of your curtains in some objects farthest removed from the windows—cushions, covers or what not. Only so can you prevent a room looking lop-sided at night.

Eighth.—If your ceiling is pronouncedly coloured, always put a large piece of it in just above where you are trying the colours for your walls. The amount of mutual reflection between walls and ceiling is almost always underestimated.

Ninth.—Try your wall-colours upon a surface in half-shade, and, when you are satisfied, make an extra trial in full shade. Leave the unshaded surface to take care of itself.

Tenth.—Test everything by artificial light as you go on.

People tell you they dislike pattern, meaning that they dislike what they recognize as pattern.

They dislike flowery wallpapers, preferring stippled paint. They dislike stencilled diapers, preferring marbling or clouding. They dislike stamped leathers, preferring those with a natural grain. Yet stippling, marbling, clouding, and the grain of leather, are all patterns, if they only realized it. There are other people more ascetic still, who do make every surface as flat and unbroken as can be. They then almost invariably play every imaginable prank with trick-lighting, covering their flat surfaces with an extremely elaborate tracery of mingling shadows.

I do not think it matters much æsthetically whether a pattern of the negative kind be aimless and non-repeating like the streaks in graining or marbling, or systematic like a Chinese diaper. Since machines produce patterns very conveniently, I am inclined to think that mechanical patterns are a gift of progress that we are foolish to refuse. The more mechanical a machine-made pattern appears, the better it will be, and the better suited to its negative function. On surfaces that both by day and by night will be crossed by shadows the decorator must use his discretion whether to break those shadows by pattern, or to leave them alone as an element in his design. On surfaces in full light, pattern of some sort is usually desirable, unless the scale of those surfaces is small in relation to the size of the room.

I have already said a good deal about furniture by implication, since form, colour and pattern are as much its elements as they are those of decoration. There is no time now to talk about cabinet-making and chair-making, both large subjects. The cabinets and chairs of houses always seem to me better regarded as the personal effects of successive owners than as integral parts of the decoration: no doubt they should be chosen to harmonize with their surroundings, but over-scrupulosity concerning this can easily lead to the vulgarity of what is known as "correct" decoration. To non-domestic buildings different laws apply; the harmony that should rule the colour and form of their walls must not stop short of the movable objects within those walls. Non-domestic buildings also must be rigorously rationed as to furniture—nothing essentially unnecessary should find a place in them. I do not think this is true in houses—we do not banish all essentially unnecessary people from our families, and I doubt if we are justified in banishing all essentially unnecessary objects from the family scene. Probably shortage of domestic labour will prevent us from contriving again those elaborate obstacle-races from door to fireplace in which the Edwardians delighted; silver-tables, jardinières, photograph-screens and milking stools have had their day.

I trust, however, that we may never come to the opposite extreme of frugality urged upon us by some theorists, who seem to believe, that everything not constantly in use should be regarded as litter and treated accordingly. I venture to suggest, indeed, that what is needed nowadays in architecture and decoration is a little more litter all round—and I am glad to see that in feminine costume at least the word elegance is ceasing to be one of no meaning. The combination of elegance with economy is a problem forced upon us now, as many times before—and I trust that it may meet with a happy solution.

Architectural Expression

Below is summarized the paper on "The Development of Architectural Expression," read by Mr. H. Austen Hall, F.R.I.B.A., at a meeting of the Sheffield Society of Architects held on October 8.

IT is convenient, perhaps, to commence with a short survey of recent architectural history; and for this purpose I will begin with a reference to Somerset House. Sir William Chambers, as you know, was the most scholarly architect of his time, and we can appreciate the greatness of his principal work. But the conception seems to me to be architectural and formal rather than human and intimate. His mind was concerned with the splendid site he had to develop, rather than with the lives of the people who were to occupy these great offices. All the things on which we set such value today, such as light and air, convenient access, and what is called direct planning, are absent from the scheme. But, fortunately, the age of planning solely for external effect is past, and we now have buildings in this country second to none for convenience and good contrivances. The advance is truly enormous, but I think it is one-sided. The skill of contrivance—of making convenience and order the first consideration—has not been well-balanced by a proportionate degree of imagination in external expression. It is as if the stark reasoning of the modern mind was unfitted, by that very thing, for the more delicate imaginings of the heart. For this reason we see numerous admirable plans and fewer elevations that can be called interesting. People will say that it is enough for the elevation to express the plan. I do not think it is enough, by any means.

Speaking at the R.I.B.A. recently, Sir W. Rothenstein said that to be a good critic it is not necessary to have a knowledge of painting. He said: "Let the critic concentrate on his subject and he will find ideas coming to him—just as the painter does when he concentrates on his subject." The art of concentration brings a matter into focus. It also brings a train of ideas from sources unknown to us, but which seem to abound when we tune in to the problem before us.

Sir J. J. Thompson, speaking recently at a British Association meeting, said that the important moments are the intervals of thought, for it is only when thought is interrupted that ideas can come—a sort of prepared vacancy allowing the subconscious mind to develop the themes upon which the conscious mind has been encouraged to dwell.

There is no doubt that modern planning is the result of laborious concentration, just as most modern elevations are evidence of the lack of it. Perhaps that is why tradition is usually followed. But tradition is only the path, not the goal. The path runs forward as well as behind us, as the compass points south as well as north. To say that traditional forms lead nowhere is absurd, for the whole history of art through the ages contradicts such a saying. There is continuity in all expressions whatever of the human spirit. Tradition, if it conveys nothing from one period to another, is misnamed. I am sure the majority of students will go forward and do better on traditional lines.

But, you will say, what are we to do with the men in the fairway—the leaders of thought whose feet are frost-bitten with the past, and who repeat and repeat with varying degrees of badness? How are we to get on unless we leave them entirely alone? I would suggest a way to you. This: that there are more ways than one of playing a stymie. It cannot help you to give up the hole, or play on to another green. There is no need to look far for a precedent in such a case as ours today. The cathedral builders, tired of Norman work, did not hesitate to bring the new foreign manner into this country, where it flourished exceedingly, and produced a flower of its own, quite native and indigenous to our shores in its ultimate expression. The Italian fashion of Inigo Jones soon became familiar and suitable. Wren was no mean judge of these things, and he considered it was the best architectural expression of his times and so employed it in the national Cathedral; but while he was doing this great work a new development was taking place—the Dutch influence. His master mind felt the strength of that influence, and to it we owe the spires of our City churches, as well as countless lovely houses all over England, including Hampton Court.

After Wren we have the Classical revival, a purer form of design from the birthplace of pure form, in Greece, not Italy. But with the advent of the Gothic revival, something seems to have gone wrong. The artificial turn towards romantic form had no such result as we have catalogued on the previous occasions, and a period of almost unrelieved boredom ensued. Even great men such as Street were devitalized. Out of the murk and darkness of the Gothic revival, as such a period of make-believe is unhappily named, emerges one bright star—and that is Norman Shaw. Do we realize that we all owe our salvation to one man, and that his influence today is still predominant?

And what is our position today? We find that architects have reached a limit, apparently, to the possibilities of the Norman Shaw tradition. Are we then going to make the mistake of Gothic revivalists, and skip a few centuries of thought as if they had never been, and wear fancy dress? I don't think so. But there is another mistake the Gothic people of 1850 made. They closed their eyes to foreign thought, and tried to get life out of their own valley of dry bones. Their predecessors, you notice, all took the world movements of their times and developed them in English soil. It is in this respect that I would follow them now—not being untraditional, but grafting the English oak with pure and fresh ideas. History teaches us that only a wise and prudent understanding of world tendencies leads to great results—just as we owe our national vitality to a mingling of many races in our blood.

I would, therefore, found my new expression on the work of a country that is vital and satisfying in its art, such as Sweden, for I feel that there we have mutual sympathy that is both racial and æsthetic.

And now let us consider the modern point of view in closer detail. Take a Georgian or period door of 150 years ago, and a modern door of laminated board covered with fine veneer. The first thing that strikes us is the absence of panelling in the latter. Why no panelling? The answer is, of course, that it is no longer necessary for the construction. Architecture and the decorative arts differ from painting and sculpture in this, that while the materials for the last two have remained practically unaltered through the centuries, the architect's materials have been profoundly altered. The whole history of architectural development is not so much social and cultural as structural.

I have chosen to talk to you about doors because the illustration serves so well to explain what is happening in the development of all architectural expression. The door gives us the human scale in building—and what I have said about door design applies equally to rooms of which doors form a part—and so of the whole building. The cornices are disappearing inside and outside our buildings, and a new interest is being given to our skylines, which are much higher than the older buildings to which we were accustomed. The windows are found to need no ornament. As we are realizing better the blessings of light and air, we find it is these which determine the size and position of windows rather than the fixed rules of the Italian masters.

It is an entirely wholesome and salutary point of view, but being also uncompromising it frequently leads to artistic conflicts from sheer honesty of expression.

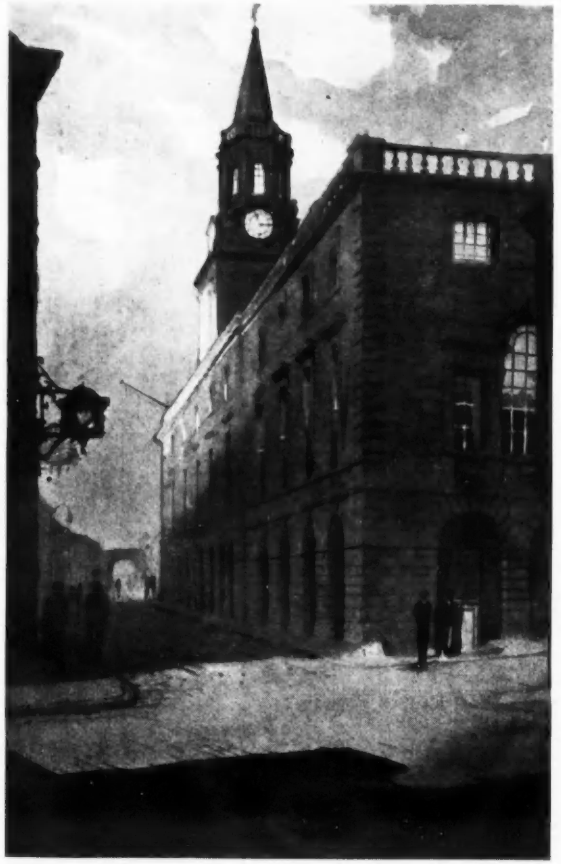
THE SKETCH CLUB

FORTIETH SESSION

BEING A FURTHER SELECTION OF SKETCHES FROM THE SECOND HOLIDAY COMPETITION

By Peter B. Dunham.]
(Pen-and-ink : 12″ × 19″)
The Town Hall, Middelburg, Holland.

By S. H. Smith.] (Coloured crayon : 13″ × 10″)
The Old Wool Hall, Lavenham, Suffolk.



[*By J. W. Hills.*
(Watercolour : 9½″ × 14″)
The Town Hall, Berwick-on-Tweed.

By J. O. B. Hitch.]
(Watercolour : 11¾″ × 6″)
Stalham, Norfolk Broads.

[*By Charles Sykes.*
(Pencil : 9¾″ × 5″)
The Deanery, Canterbury.

By S. E. Ancher.] (Crayon : 9″ × 11″)

Gateway at Nuremberg.

By J. W. Hills.] (Watercolour : 7″ × 12″)

John Knox's House, Edinburgh.

By E. W. Winkless.] (Pencil : 13″ × 21″)

St. Bartholomew's Gateway, London.

By Brian Hackett.] (Pen-and-ink : 9″ × 10½″)

The Oak House, West Bromwich.

By O. Bedford.] (Watercolour : 8½″ × 12′)

The Green Cupolas.

By A. J. Passmore.] (Watercolour : 11″ × 7¼″)

Chiddingstone, Kent.

By Brian Hackett.] (Watercolour : 9½″ × 13½″)

The Tower, Birmingham Cathedral.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Surface Disintegration of Facing Bricks

AN architect wished to know the cause of the deterioration of facing bricks in the walls of a country house, and desired advice on remedial measures. The house was erected some nine years ago, and for the past two years there has been continual disintegration and spalling of the exposed faces of the bricks.

The specimen brick submitted appears somewhat soft and friable on all faces, and would be judged to be underburnt. Parts of the outer face of the brick are spalled off, and under the remaining portions of the original face there is a white deposit, which is not to be found on the unweathered faces.

A layer of brick $\frac{1}{8}$ in. thick was removed from the weathered and inner faces of the brick for examination, and soluble salts were extracted from these layers in the following proportions by weight :

	Weathered Face.	Unweathered Face.
	Per cent.	Per cent.
Total Soluble Salts	4.89	0.74
Sulphur Trioxide (SO_3)	2.42	0.30

It was found that the soluble salts consisted mainly of sodium sulphate, although sulphates of magnesium, potassium and calcium were also present. Tests showed the brick to possess medium resistance to crystallization of sodium sulphate.

From the foregoing tests it would appear that the spalling of the face of the bricks was due to the crystallization of sodium sulphate. The origin of the salts could not be traced with certainty, since only one brick was tested and no unused bricks were available. Soluble salts in brickwork may be derived from the soil, from the mortar, from other materials in contact with the bricks, or from the bricks themselves. In the case of a normal brick wall, with dampcourse and not in contact with other materials, the probability is that the high sodium sulphate content would have been originally present in the bricks. The soluble salt content of bricks may often be decreased by harder burning.

It is to be regretted that there is little that can be done to arrest decay of this sort. The most useful remedy is copious washing with a hose at fairly frequent intervals, with a view to reducing the concentration of soluble salts in the face of the bricks. Whether the trouble can be entirely overcome in this way must depend to a considerable extent on the origin of the salts and the amount available.

Transmission of Sound through Glazing

An architect requested the views of the Building Research Station on the problem of transmission of sound through glazing.

The window presents a difficult problem in sound insulating design, and it is necessary, when considering it, to bear in mind the three ways in which air-borne sound may be transmitted through windows, (*a*) through the body of the materials of which the window is constructed ; (*b*) through interstices, *e.g.*, the joint between glass and frame, or between frame and masonry, and (*c*) by vibration of the window as a whole, or of the individual panes of glass.

As regards (*a*), no special type of glass is known to have special merits as a sound insulator, but it may be said that the greater the weight per unit area the better. The possibility of transmission through interstices (*b*) can be avoided, of course, by good construction and careful attention to detail. It is desirable to provide for artificial ventilation to take the place of open windows during the period when rooms reserved for important meetings are in occupation.

The bulk of the sound transmitted through windows is undoubtedly due to (*c*), the small ratio of thickness to area in individual panes, and the window as a whole making the membrane effect predominant. In the first place, therefore, it is important to employ frames as heavy and rigid as is reasonably possible. In windows of constant overall size, the ones having the smaller panes have been found to transmit less sound.

Double glazing is advantageous when the glass is fixed in separate frames, preferably with the panes bedded in saddler's felt or rubber. There is practically no advantage to be gained by glazing in the same frame with, say, two $\frac{1}{8}$-in. panes placed very near to one another, over glazing with one $\frac{1}{4}$-in. pane; there is indeed, not very much advantage in two $\frac{1}{8}$-in. panes over a single $\frac{1}{8}$-in. pane if they are fixed in the same sash and very close together. The advantage of the air cushion appears, indeed, to be largely dependent on the thickness of the air layer, and a thickness of less than about 1 in. scarcely gives sufficient improvement to warrant the expense of double glazing. Investigations have indicated that a large measure of the value of double glazing is reached if about 2 ins. separates the panes. In all forms of double glazing the membrane effects will be minimized by making the separate membranes composing the window dissimilar.

It will be seen, then, that to obtain really good sound insulating qualities in the windows it would be desirable to employ double glazing in separate and dissimilar rigid frames, the thicker the glass and the smaller the pane size the better. If a double frame is out of the question, and it is impracticable to place the double glazing in the one frame at something approaching 2 ins. apart, then reliance might as well be placed on single sheets of as great a thickness as is reasonable, and a rigid frame.

Treatment of Corroded Water Main

The architect of a local authority requested the advice of the Station in the following circumstances. In connection with institution buildings a 3-in. iron water main was laid for the purpose of fire protection. Water had not been drawn from this main for a number of years, and it was found recently that the supply of water through the main was seriously reduced, the pipes being partly blocked by corroded metal on the inside. Failing some form of treatment to clear the pipes, the authority would be obliged to renew the main.

The usual treatment adopted for the protection of metal water mains is a coating of a bituminous preparation applied hot; this, however, would not be expected to provide a permanent remedy against corrosion. It is understood that non-corrosive pipes, such as asbestos cement pipes or pipes of reinforced concrete, are now coming into use, although the latter type are mostly confined to pipes of large dimensions.

In the case of a water main, where little, if any, water is ordinarily drawn off, it would be anticipated that even though the supply of water had been seriously reduced, the actual loss of metal from the walls of the pipes might be comparatively slight. If this were found to be the case, and there is no sign of pitting of the metal by corrosion to such an extent as seriously to reduce the thickness of metal, it might be worth while to consider the possibility of cleaning the pipes by means of acid to remove the " furring " on the inside.

By the addition of substances generally referred to as inhibitors, it is possible to prepare an acid solution which will dissolve rust and lime scale without serious attack upon metal. Inhibitors

have been used for pickling steel for many years, and they have recently been applied in America for cleaning out rust-tuberculated pipe systems. By such methods it might be possible to restore the mains at a cost trifling in comparison with the cost of renewal. So far as is known, this method has not been used in this country. In order that the operations may be performed, it is necessary to cut off the system from the mains at the lowest point; to introduce an acid at the top of the system so as to fill it completely; and to provide means for flushing out the system from the top afterwards by a strong current of water to wash out loosened tuberculation and deposits.

A suitable solution would be ten gallons commercial hydrochloric acid to which is added ten gallons of hot water and 1 lb. quinoline.

The cost of the quinoline is about 17s. 6d. This solution would treat about sixty feet of pipe. It would be well as a preliminary to test a short length of pipe as an experiment. The solution should be made up in a wooden vat, and care should be taken in filling the pipe to avoid danger from bubbling up of acid due to slight evolution of gas during treatment.

The solution should be left in the pipe for eight to twelve hours.

A description of the treatment of a pipe system is given in *Chemical and Metallurgical Engineering*, Volume 34, 1927, page 423.

Coarse Aggregate for use in Concrete

A civil engineer submitted a sample of the coarse aggregate proposed to be used in concrete work in which he was interested. The particular point on which information was required was whether the presence of a considerable proportion of fine dust should be admissible.

The examination of the sample of broken granite submitted showed that over 50 per cent. by weight passed through a No. 4 ($\frac{3}{16}$-in.) sieve, and that a considerable proportion of fine dust was present.

The presence of dust to the extent of more than one or two per cent. is definitely harmful to concrete. When the dry materials contain an excess of fine particles, a considerable increase in the quantity of mixing water is necessary, and a decrease in the strength of the finished concrete will result.

If, as stated, the granite is to be combined with cement and sand in the proportions of 1 : 2 : 4 then an apparently oversanded mix will result, and will lead to an excessive water requirement, lack of workability and low strength. If the granite be used without sand, merely mixing the cement and granite in the ratio of 1 : 6, then a good strength will be obtained, although the concrete will not be particularly workable. If the granite is first sieved on a No. 4 sieve, and only the retained material used with ordinary sand, then a good concrete could be made; the removal of the fine dust from the granite (material passing a No. 30 sieve) would not be sufficient to improve the quality of the concrete.

COMPETITIONS OPEN

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions, etc., obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, OCTOBER 21

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Housing and town planning tour to Manchester and Liverpool. Departure to Manchester from Euston at 6.5 p.m. **6.5 p.m.**

INSTITUTE OF FUEL. Annual Dinner and Dance, to be held at the Connaught Rooms, Great Queen Street, W.C.2. Sir Hugo Hirst, BT., will preside. 6.45 for 7.15 p.m. **7.15 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Early Renaissance in Northern Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

SCOTTISH IDEAL HOME EXHIBITION. At Kelvin Hall, Glasgow. Until October 24.

THURSDAY, OCTOBER 22

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Town Hall, Manchester. Lecture dealing with the activities of the Corporation with regard to housing, etc. 10 a.m. Luncheon (by invitation of the Corporation). 12.45 p.m. Tour of slum areas, housing estates and town-planning roads. 2 p.m. Reception in the City Art Gallery. 8 p.m. **10 a.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "The Splendours of Greece." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, OCTOBER 23

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At the Municipal Buildings, Liverpool. Address by the Chairman of the Housing Committee on the work of the Liverpool Housing Committee. 10.30 a.m. Visit to Springwood Estate. 12 noon. Luncheon at Childwall. 1 p.m. Visit to housing estates. 2.30 p.m. **10.30 a.m.**

LONDON SOCIETY. Visit to the Chelsea Royal Hospital, Royal Hospital Road, S.W.3. **2.30 p.m.**

SATURDAY, OCTOBER 24

Sunrise, 6.37 a.m. Sunset, 4.51 p.m.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. At Liverpool. Visit to slum-clearance areas. 10 a.m. Return to London at 2.5 p.m., arriving at Euston at 6 p.m. **10 a.m.**

R.I.B.A., 9 Conduit Street, W.1. Third of four non-technical lectures. "Tendencies in very Modern Buildings." A. S. G. Butler, F.R.I.B.A. Chairman: Sir Richard Paget, BT., HON. A.R.I.B.A. **3 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Second of five non-technical lectures on Present-day Architecture. "Furnishing and Decorating the House." By Edward Maufe, M.A., F.R.I.B.A. **3 p.m.**

TUESDAY, OCTOBER 27

KING'S COLLEGE, Strand, W.C.2. Third of nine public lectures on Gothic Art. "French Gothic: Paris, Chartres, Amiens, etc." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

LONDON SOCIETY. Visit to "Atlanta" Women's Engineering Workshops, 1 and 3 Brixton Road, S.W.9. **3 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. London and Home Counties Branch. At 1 Wilbraham Place, S.W.1. "Architectural Acoustics." By C. W. Glover, L.R.I.B.A. **7 p.m.**

WEDNESDAY, OCTOBER 28

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Palaces and Villas of Rome." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, OCTOBER 29

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "The Roman Empire." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SATURDAY, OCTOBER 31

Sunrise, 6.49 a.m. Sunset, 4.38 p.m.

R.I.B.A., 9 Conduit Street, W.1. Last of four non-technical lectures. "The Uses of An Architect." By H. B. Creswell, F.R.I.B.A. Chairman: Charles Marriott, HON. A.R.I.B.A. **3 p.m.**

MONDAY, NOVEMBER 2

R.I.B.A., 9 Conduit Street, W.1. Inaugural Meeting: President's address. **9 p.m.**

TUESDAY, NOVEMBER 3

KING'S COLLEGE, Strand, W.C.2. Fourth of nine public lectures on Gothic Art. "Symbolism and Iconography." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Westminster, S.W.1. Presidential Address. **3.30 p.m.**

WEDNESDAY, NOVEMBER 4

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "St. Peter's Cathedral and the Vatican, Rome." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, NOVEMBER 5

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Hardwoods." By Alexander Howard. **7.30 p.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A.

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "Further Excavations on Macedonian Sites." By W. A. Heurtley. Also "Recent Discoveries at Vinca by Dr. M. Vassito." By Professor J. L. Myres, F.S.A. **8 p.m.**

TRADE NOTES

In order to demonstrate the suitability of Duresco paint for the treatment of building exteriors, the "inset" advertisement of the Silicate Paint Company (J. B. Orr & Co., Ltd.), of Charlton, S.E.7, in this issue of THE ARCHITECTS' JOURNAL, has been specially printed on paper with an actual Duresco surface. This unique method of advertising should prove of great value to our readers, because, by it, they are afforded the opportunity of judging from the actual advertisement, the relative merits of Duresco paint for its specified purpose.

*

In the *Cult of Colour*, a new brochure recently issued by the White Lead Publicity Bureau, of 36–37 King Street, E.C.2, much interesting information is given concerning colour and comfort in home decoration. Four of the eight decorative schemes illustrated in the brochure, all in colour, were prepared for the stand of the White Lead Publicity Bureau at the Decorators' Exhibition, held at Newcastle-on-Tyne last month. The designs are for a dining-room, sun parlour, bathroom and nursery. The remaining four designs illustrated are for other typical rooms of the modern house: the lounge, entrance hall, a bedroom, and the kitchen. The whole of the painting in the colour schemes described has been executed in white lead paints, conforming to the quality standard of the British Standard Association's specification. The colours have also been taken from the British Standard schedule of colours, issued by the same Association. A feature of the Bureau is a special studio service for the preparation of colour designs.

*

Messrs. Lumbys, Ltd., of Greetland Boiler Works, Halifax, have recently issued a leaflet illustrating, by means of sectional drawings, their new series of sectional cast boilers. Among the many advantages claimed for the new models are a more direct fire surface, a larger fire-box capacity, and a larger waterway over the crown of the fire-box. The boilers are suitable for oil fuel, and it is said that they can be banked for twelve hours.

*

In order to mark the occasion of the second International Congress of the International Commission on Illumination, held in Great Britain last month, the British Commercial Gas Association recently issued a brochure entitled *Daylight by Night*, containing illustrations and descriptions of some of the modern installations of gas lighting in the more important thoroughfares of Great Britain. The sixty-four illustrations—five of which are reproduced in colour from renderings by Mr. William Monk, R.E.—serve to prove how gas is used with brilliant effect to light the streets of London, the main roads of provincial cities, and the promenades of fashionable spas and seaside resorts. It is pointed out in the introduction to the book that a recent investigation into mileage showed that four-fifths of the streets in Great Britain are illuminated by gas.

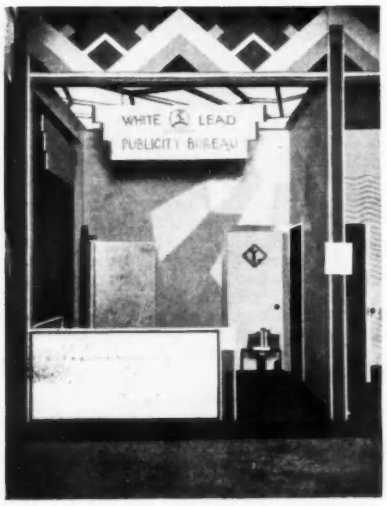
*

The Midland Electric Mfg. Co., Ltd., of Birmingham, have just issued a catalogue in which they illustrate and describe the full range of their manufactures. In addition to the Glasgow-Rex and Memrex series of switches and combined switches and fuses, there are also illustrated a number of new designs, including the Memota motor control gear and the Memkuka cooker control unit, etc. Much useful information in connection with public regulations, as applied to the installation of switch and fuse gear is given; together with a number of tables dealing with cable capacity, fuse wire, wiring of motors, etc. The catalogue may be obtained, free of charge, on application to the Company.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Town Hall and Municipal Buildings, Wimbledon, S.W. (pages 522–526). General contractors, Galbraith Bros., Ltd. Sub-contractors: Dorman Long & Co., Ltd., constructional steelwork; Richard Hill & Co., Ltd., steel fabric reinforcement to solid concrete floors; Caxton Floors, Ltd., hollow tile floors; Crittall Manufacturing Co., Ltd., metal windows; W. H. Heywood & Co., Ltd., roof glazing; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt work; J. C. Edwards (Ruabon), Ltd., terra-cotta ridges and hip tiles; F. Braby & Co., Ltd., copper covering to dormers; Doulton & Co., Ltd., sanitary fittings; J. Whitehead and Sons, Ltd., marble wall finishings; Diespeker & Co., Ltd., terrazzo floor finish; Hollis Bros. & Co., Ltd., wood-block floors; Gilbert Seale and Son, Ltd., fibrous plasterwork and stone and wood carving; Veronese Co., reconstructed stone dressings to Town Hall; F. Morton Junr. & Co., spring floor in public hall; Benham and Sons, Ltd., heating and ventilating installations; G. E. Taylor & Co., electric lighting installation; Cashmore Art Workers, steel domes and leaded lights; Morris-Singer Co., ornamental ironwork; W. Macfarlane & Co., gates and railings; S. Elliott and Sons (Reading), Ltd., revolving doors; Smith, Major and Stevens, Ltd., electric lifts; Dreadnought Fireproof Doors, Ltd., fireproof doors; Gent & Co., electric clocks; Art Pavements and Decorations, Ltd., wall tiling; W. and R. Leggott, Ltd., locks and door furniture; J. Gibbons, Ltd., door springs; Pyrene Co., Ltd., fire appliances; Osler and Faraday, Ltd., electric light fittings; Bromilow and Edwards, Ltd., organ lift; Turner Lord & Co., furniture, chairs and tables; Elys, Ltd., soft furnishings; Hampton and Sons, Ltd., carpets and floor coverings; J. Compton Organ Co., Ltd., organ.



The stand of the White Lead Publicity Bureau, at the Decorators' Exhibition, held at Newcastle-on-Tyne last month.

Salt Union Building, Stoke Prior, Worcestershire (pages 527–529). General contractors, J. and A. Brazier, Ltd. Sub-contractors: Val de Travers Asphalte Paving Co., Ltd., asphalt and waterproofing materials; Siegwart Fireproof Floor Co., Ltd., reinforced concrete, fireproof construction, and special roofings; Empire Stone Co., Ltd., artificial stone; Charles Wade & Co., Ltd., structural steel; Pilkington Bros., Ltd., Vita glass; Acme Paving and Flooring Co. (1904), Ltd., wood-block flooring; W. Matthews and Son, central heating; Parker, Winder and Achurch, Ltd., sanitary and kitchen fittings, grates, tiling and mantels; Hope's Heating and Lighting, Ltd., electric wiring and electric light fixtures; A. Brown & Co., door furniture; Henry Hope and Sons, Ltd., cast-lead letters, casements and window furniture; Dictaphone Co., Ltd., internal telephones; John Booth and Sons, fireproof doors; Walter Macfarlane & Co., Ltd., ornamental cast-iron gates, railing and folding gates; John Boulton, marble; A. Brown & Co., cloakroom fittings.

In the list of contractors for the New Hostel for Students, Wotton House, Glos., illustrated in the last issue of the JOURNAL, the name of the Fawcett Construction Co., Ltd., who supplied and erected the fireproof floors over the kitchens and corridors, was inadvertently omitted.

ANNOUNCEMENTS

Owing to the forthcoming demolition of premises in New Street, Mr. Arthur J. Wood, F.R.I.B.A., has removed his office to 5 Grey Friars, Leicester. Telephone No.: Leicester 5285.

Mr. T. J. Cahill, B.A., has been appointed Assistant Lecturer in Architecture at Armstrong College, University of Durham. He has had professional experience both in Manchester and London.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BARKING Corporation is to utilize sixteen acres of land in Movers Lane for the erection of houses.

The BARKING Corporation has obtained sanction for a loan of £44,600 for the erection of 135 houses in Upney Lane.

The BERMONDSEY B.C. is to erect a block of sixteen flats on the Gilhams Court site, at a cost of £9,300.

The BERMONDSEY B.C. has approved plans for the erection, by direct labour, of twenty-four flats in the Rotherhithe Street area, and twenty-four flats on the Grange Walk site.

Plans passed by the CAMBERWELL B.C.: Building on site of 442-4 Old Kent Road, for Mr. G. L. Russell; four houses, Peckham Rye, for Messrs. Dowton & Co.; additions, Cheltenham College Mission, Nunhead Grove, for Messrs. Travers and Grant; additions, St. Chrysostom's Church, Hill Street, for Mr. T. F. Ford; two shops, East Dulwich Road, for Mr. F. Nash; additions, 7 Camberwell Grove, for Messrs. H. P. Wyatt, Son and Partners.

The CROYDON Corporation has obtained sanction for a loan of £52,580 for the erection of 134 houses on the Waddon estate.

Plans passed by the LEWISHAM Corporation: Six houses, Newquay Road, for Mr. T. A. Boughton; four houses, Perry Hill, for Mr. S. Towse; four houses, Greenwood Road, for the Highfield Estates, Ltd.; twelve shops and flats, High Road, Lee, for Mr. J. P. Briggs; ten houses, Upwood Road, for Messrs. Thomas Allen (Lee), two houses, Westwood Park, for Mr. H. Macintosh.

Mr. G. A. Hodgkins has prepared plans for the erection of a cinema in London Road, REIGATE.

The WEST HAM Corporation is to proceed with the erection of the second section of the mental hospital at Goodmayes.

The WESTMINSTER City Council is to proceed with the erection of the sixth block of tenements on the Grosvenor housing estate, from plans prepared by Sir Edwin Lutyens, R.A.

Plans passed by the WESTMINSTER City Council: New streets, off Horseferry Road, for Sir Frank Baines; two blocks of dwellings, Regency Street and Causton Street, for Messrs. Cluttons; rebuilding, Hotel Curzon, Curzon Street and Bolton Street, for Mr. Henry Tanner; rebuilding, Queen's Hotel, Leicester Square, for Mr. H. K. Dyson; building 150-1 Drury Lane, for Messrs. Watney, Combe, Reid & Co., Ltd.

SOUTH-WESTERN COUNTIES

Messrs. Rowlands Bros. & Co., Ltd., are obtaining land at AVONMOUTH DOCKS, for further extensions of premises.

The BRISTOL Corporation proposes to complete the Rupert Street widening scheme, at a cost of £45,500.

The PLYMOUTH Corporation is having plans prepared for the erection of a welfare centre in St. Aubyn Street.

Plans passed by the PLYMOUTH Corporation: House, Mannamead Road, for Mr. H. Edgington; alterations, 2 Athenæum Terrace, for General Accident Assurance Corporation, Ltd.; house, Edgar Terrace, for Mr. A. Delafield; six houses, North Down Road, for Mr. C. Jope; four houses, Venn Grove, for Mr. Holmes; eight houses, Birchfield Road, for Mr. R. T. Pearce; two shops, College Avenue, for Mr. S. J. Damerell; alterations, 18 Emma Place, for Royal Marines Old Comrades Association; twelve houses, Prince Maurice Road, for Mr. J. Rendle; two houses, Burnham Park Road, for Mr. E. J. Morrish; showrooms and garage, 76 Coburg Street, for Messrs. Reeds (Plymouth), Ltd.; alterations, 48-9 Bedford Street, for Messrs. Upsons, Ltd.; four houses, Berrow Park Road, for Mr. E. A. Davy; six houses, Victoria Road, St. Budeaux, for Messrs. A. E. Searle and Sons; eight houses Ganges Road, for the City Estate Office; two houses, Cresthill estate, for Mr. F. Westcott; six houses, Ganges Road, for Mr. R. Bate; alterations and additions, Nazareth House, Durnford Street, for the Sisters of Nazareth; new offices, Coburg Street, for the Education Committee; new street pavilion and covered stand, Efford Lane, for the Directors of Beacon Castle Greyhound Track; eight houses, Alma Road, for Messrs. G. H. Smith and Son; two houses, Cemetery Road, for Messrs. Hayter and Cole; twelve houses, Cresthill estate, for Mr. W. Andrews.

Plans passed at POOLE: Two houses and garages, Canford Cliffs Avenue, house, Bourne Vale Road, and house, Alder Road, for Mr. G. Manners; house and garage, Cassel Avenue, for Messrs. Bartlett and Whiffen; two pairs semi-detached houses, Fortescue Road, for Mr. C. B. Hann; two houses, Highland Road, for Mr. L. H. Lockyer; three houses, Ringwood Road, for Mr. W. G. Hillman; house and garage, corner of Clifton Road and Spur Hill Avenue, and three houses, Sheringham Road, for Messrs. Stretch, Baxter and Curry; house, Arley Road, for Mr. J. Jagger; amended plan of five dwelling-houses, Langdon Road, for Messrs. Rosser and Sturman; house, Tatnam Road, for Mr. J. Francis; house and garage, corner of Gorse Hill Road and Gorse Hill Crescent, for Mr. A. Young; house, Sherwood Avenue, for Mr. S. C. Rowden; house and garage, Blake Hill Crescent, and five houses, Albert Avenue, for Messrs. Crabb and Crabb; house, Livingstone Road, and house, Berkeley Avenue, for Mr. M. J. Lawford; house, off Old Wareham Road, for Mr. A. C. Champion; house, Lindon Road, for Mr. H. G. Gale; house, Constitution Hill Road, for Messrs. S. Whitelock & Co.; four pairs semi-detached houses, off Ringwood Road (Broom Road), for Mr. E. C. Pitcher; house, corner Castledene Road and Castledene Crescent, for Mr. J. C. Philpotts; house and office, corner Cranbrook and Upper Roads, for Mr. G. Maidment; house, Shottsford Road, for Mr. W. J. Dacombe; two houses, Houlton Road, for Mr. F. Jones; house and garage, Gorse Hill Road, for Mrs. H. K. Reest; house, Gorse Hill Road, for Messrs. Corbin and Clark; block of three shops, with dwelling-houses over, corner of Blandford Coles Avenue, for Messrs. Stokes and Whittle; two houses and garages, Branksea Avenue, for Mr. H. Kendall; four houses, Lulworth Avenue, for Mr. F. H. Cockram; eight pairs semi-detached houses, off Salterns Road (Worthington Crescent), for Mr. R. Thorne; four pairs semi-detached houses, Pound Lane, for Mr. F. G. Pearcy.

Plans passed by the TORQUAY Corporation: House, Nut Bush Lane, Shiphay, for Mr. R. Atkinson; bungalow, Windmill Hill, for Messrs. H. Kershaw & Co.; additions, Lincombe Hall Hotel, Lower Woodfield Road, for Lincombe Hall, Ltd.; house, Barton Cross, for Mr. F. Powell; house, Torquay Station, for Railway Co.; four houses, Reeves Road, Chelston, for Chelston Building Co.; bungalow, Jacks Lane, for Mr. S. Westlake; two houses, Newton Road, for Mr. H. Pearce; house, Millbrook Park, for Mr. Riggs; four houses, Fore Street, Barton, for Mr. R. Kellow; eight houses, Reeves Road, for Mr. P. D. Cavanna.

The WEYMOUTH Corporation has decided to erect sixty non-parlour houses on the Westham estate.

Plans passed by the WEYMOUTH Corporation: Alterations, 131 Dorchester Road, for Mr. C. W. Pike; alterations, 10 Gloucester Row, house, Weymouth Bay Avenue; shop and premises, Dorchester Road, and house, Buxton Road, for Messrs. Andrews and Andrews; alterations, St. Mary's Schools, two houses, Southdown Road, house, Southlands Road, and house, St. George's Avenue, for Messrs. S. Jackson and Sons; house, Spa Road, for Mr. A. J. Samways; house, Knightsdale Road, for Messrs. Theo. Conway; house, New Close Gardens, for Mr. C. C. Board; house, Roman Road, for Mr. A. G. Greenham; house, St. George's Avenue, for Mr. W. H. Gerrish.

NORTHERN COUNTIES

Plans passed by the HULL Corporation: Twelve houses, Willbery Road, for Mr. D. Smith; eight shops, Beverley High Road, for Messrs. Atkinson and Overton; six shops, Murrayfield Road, for Messrs. A. H. Evans & Co.; thirty-six houses, Kirklands Road, for Mr. H. Johnson; six shops, Endyke Lane, for Mr. W. B. Blanchard; eight houses, off Endyke Lane, for Mr. R. W. Trigg; thirty-six houses, Kirkham Drive, for Mr. Arthur Johnson; four houses, Spring Gardens, for Mr. E. Turner; seven houses, Willerby New Road, for Mr. J. H. Cickerman; eight houses, Calvert Road, for Mr. J. Stirling; eight houses, Goddard Avenue, for Messrs. W. H. Beal and Son; forty-three houses, Huntley Drive, for Messrs. A. H. Evans & Co., Ltd.; ten houses, Inglemire Lane, for Mr. E. Marsden; twenty houses, Lodge Street, for Mr. J. E. Barnet; eight houses, Waldegrove Avenue, for Mr. W. H. Dowell; four houses, Cayton Road, for Mr. S. Bays; shop, James Reckitt Avenue, for Messrs. Mallory's, Ltd.; parish hall, Bilton, for the Vicar of Bilton.

The LEEDS Watch Committee has passed plans for the erection of a cinema at the junction of Roundhay Road and Harehills Lane.

The MORECAMBE Corporation is considering the purchase of a site at Westgate for a housing scheme.

The SHEFFIELD Corporation has authorized the city architect to prepare plans for extensions at the City General Hospital.

The SHEFFIELD Corporation has approved the layout plan of the city architect for the erection of another 120 houses on the Manor estate.

Plans passed at SHIPLEY: Four houses, Ashfield Road, for Mr. W. Smith; three houses, Westfield Lane, for Mr. F. Watmough; thirty-six houses and two shops, new streets off Wrose Road; two houses, Wrose Road, and sixteen houses, Oakdale Avenue, for Messrs. A. and F. Mellor.

Plans passed at TYNEMOUTH: Two houses, Manorway, for Mr. J. R. Wallace; sixteen houses, Seafield Avenue, for Messrs. H. D. Burton, Ltd.; six bungalows, The Quadrant, Balkwell Estate, for Mr. W. Moore; four houses, Billy Mill Lane, for Mr. J. S. Hurrell; alterations to tenements, Charlotte Street and Church Street, and four houses, Billy Mill Lane, for Mr. W. Stockdale; shops and flats, Heaton Terrace and Burt Avenue, for Mr. J. W. Hanson; alterations, 59 and 60 Norfolk Street, for Mr. F. R. N. Haswell; bungalows, Balkwell Estate, for Messrs. Woodall and Shepherd.

The Lancashire Education Committee is to erect an elementary school for 700 children at WHITEFIELD.

The YORK Corporation is to prepare a clearance scheme for the Layerthorpe area.

The North Riding Education Committee is to erect an elementary school in Fifth Avenue, YORK.

Plans passed by the YORK Corporation: Store, Chicory Yard, for Mr. J. W. Sutcliffe; two houses, Hull Road, for Messrs. Abbott and Son; house and shop, Burton Stone estate, for Mr. B. J. Wilson; additions, "King William" Inn, Layerthorpe, for Messrs. J. J. Hunt, Ltd.; additions, "Grapes" Hotel, Tanner Row and "Cricketers" Arms, Toft Freen, for the Tadcaster Tower Brewery Co., Ltd.; additions, 21 Goodramgate, for Messrs. M. J. Bowman and Son; additions, 50 Moorgate, for Mr. T. B. Lyth; house Rawcliffe Lane, for Mr. C. Fanthorpe; 168 houses and sixteen flats, Heworth Grange, for the Corporation Housing Committee.

P

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_1	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A_2	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_2	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d
Grey Stone Lime . . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . . ,,	2 13 6
Thames Ballast . . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Bindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . . ,,	2 0
3" ,, ,, ,, . . . ,,	2 3
4" ,, ,, ,, . . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R at Nine Elms :	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d d F.O.R. London station :

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, ¾" . . . ,,	17 6
,, 1" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			⅝"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6			
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6			
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–			
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–			
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–			
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–			

	d.
Scotch glue . . . . . lb.	9

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts :

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	. 50
Water . . . 58½	,, water	. 45
Steam . . . 55	,, steam	. 40

FITTINGS.

Gas . . . 57½	Galvanized gas	. 47½
Water . . . 52½	,, water	. 42½
Steam . . . 47½	,, steam	. 37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . ,,	10 0
,, ,, ⅝" . . ,,	9 9
,, ,, ½" . . ,,	9 6
,, ,, ⅜" . . ,,	9 0
,, ,, ¼" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

Cast-iron rain-water pipes of	3" s. d.	4" s. d.
ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets. . ,,	4 0	6 3
Plinth bends, 4½" to 6" . . ,,	4 0	5 6

Half-round rain-water gutters of	5"	6"
ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . cwt.	20 0
,, drawn pipes . . ,,	20 6
,, soil pipe . . ,,	23 6
,, scrap . . ,,	10 0
Solder, plumbers' . . lb.	11
,, fine do. . . ,,	1 3
Copper, sheet . . ,,	1 0
,, tubes . . ,,	1 4

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 0
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,, over 15 . ,,		7 6
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
1″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all stutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
¼″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
2½″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
¾″ do.	,,	3 4 0
⅝″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	,,	1 19 0
Do. in covering to turrets, etc.	,,	2 6 0
Do. in soakers	,,	1 12 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks		⅛″ s. d.	¼″ s. d.	½″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
	F.R.	1 2	1 7	2 1	2 8	3 8	—	
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9	
Extra, only to bends	Each	—	—	—	—	2 3	6 6	
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—	
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—	
Lead traps	,,	—	—	—	7 6	10 6	—	
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—	
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—	

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,, ,,	,,	1 7 0
Extra, only for small quadrant angle ,, ,,	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	1 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper from	,,	3 0

BATHING BEACH AT WANNSEE, BERLIN

SOME FURTHER DETAILS TAKEN FROM THE BUILDINGS ALREADY ERECTED

[Martin Wagner and Richard Ermisch, Architects.

THE TERRACE FACING THE BEACH, AND ONE OF THE STAIRWAYS

AS stated in the supplement with the issue for October 7, devoted to this subject, the dressing pavilions are connected by a covered way, with several stairways leading up to the terrace above. Illustrations of both features are now given.

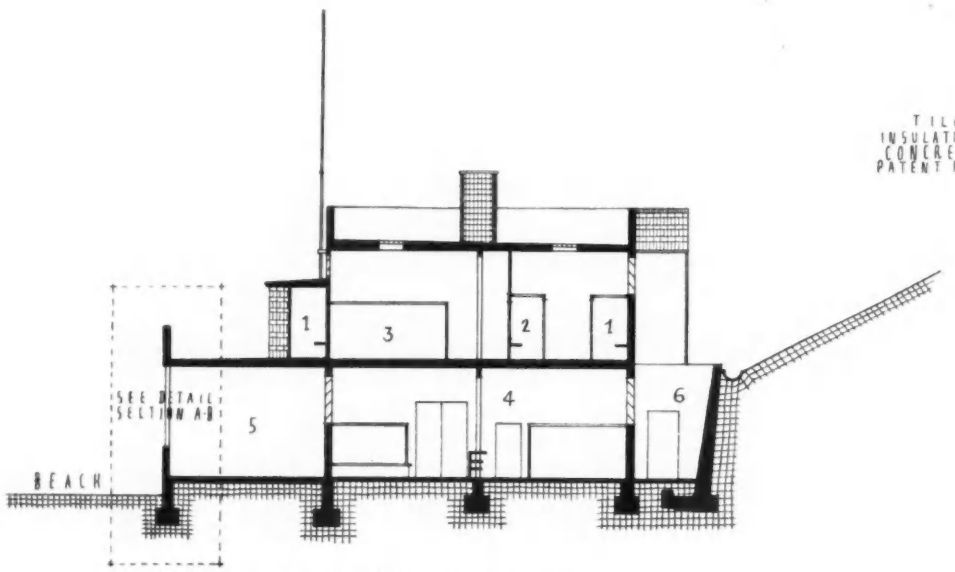
The covered way makes a useful refuge in sudden downpours, and also binds in an effective architectural way the numerous single blocks.

The buildings are constructed on steel framework, part of which is left showing, though most of it is covered with bright yellow clinker bricks to tone with the sandy beach. All visible ironwork and the woodwork to the windows and roof are painted white, so that the general appearance throughout is bright and clean.

The interiors are treated in the same way.

The entire construction of this well-coordinated group of buildings is solid, yet simple and cheap, neat and functional. From the broad outline to the last detail, the scheme reveals sure grasp of the requirements for a populous pleasure centre of up-to-date character.

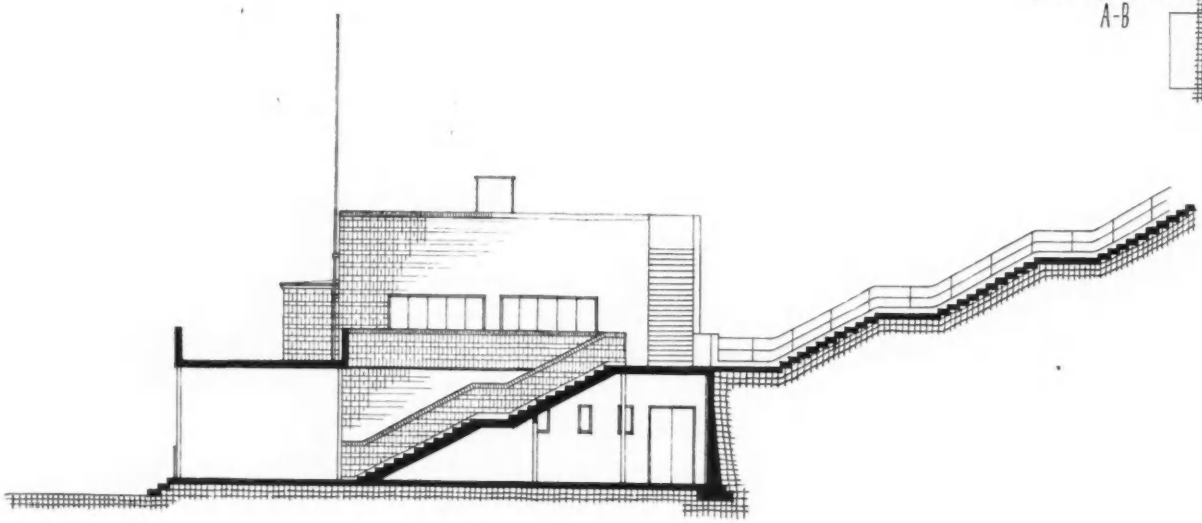
BATHING STATION AT WANNSEE NEAR BERLIN • DESIGNED



SECTION • SCALE 1/16" TO ONE FOOT

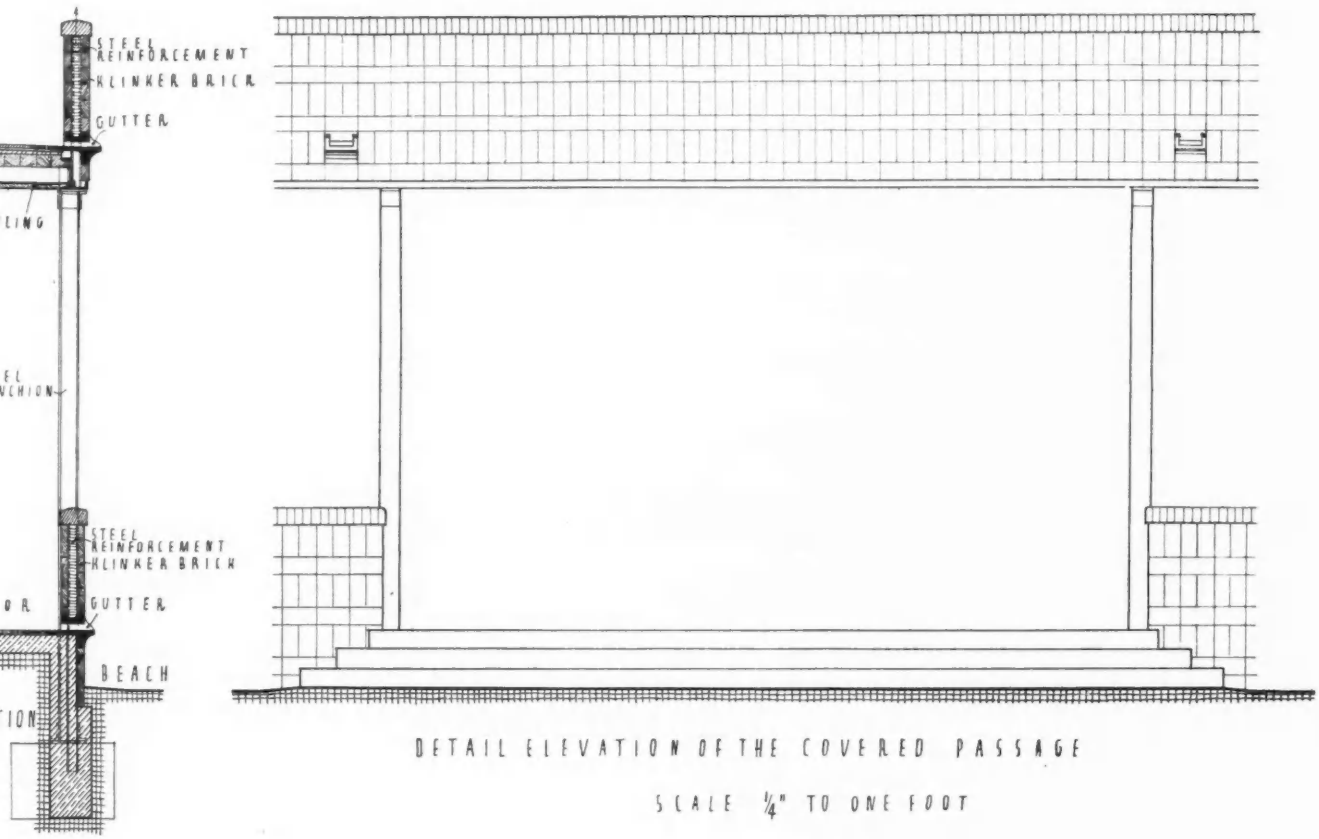
1• SINGLE CUBICLES 2• CHANGING CUBICLES
3• COMMON CLOAKROOM FOR CHANGING CUBICLES
4• COMMON CHANGING ROOM
5• CORRIDOR 6• COURT

DETAIL SECTION A-B



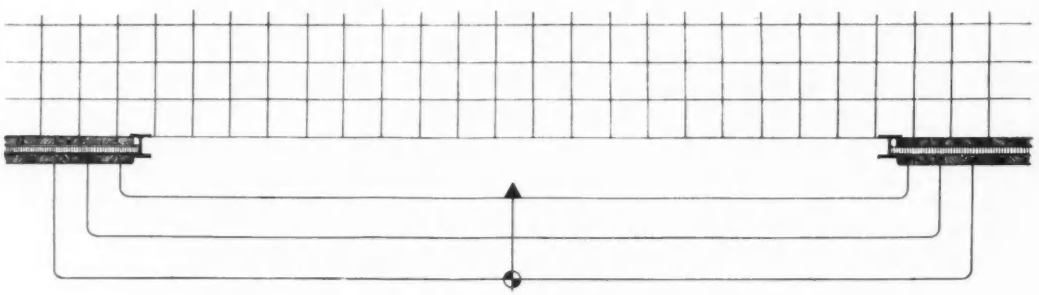
SECTION THROUGH AN EXTERNAL STAIR

IGNED BY HERREN M·WAGNER AND R·ERMISCH·BERLIN

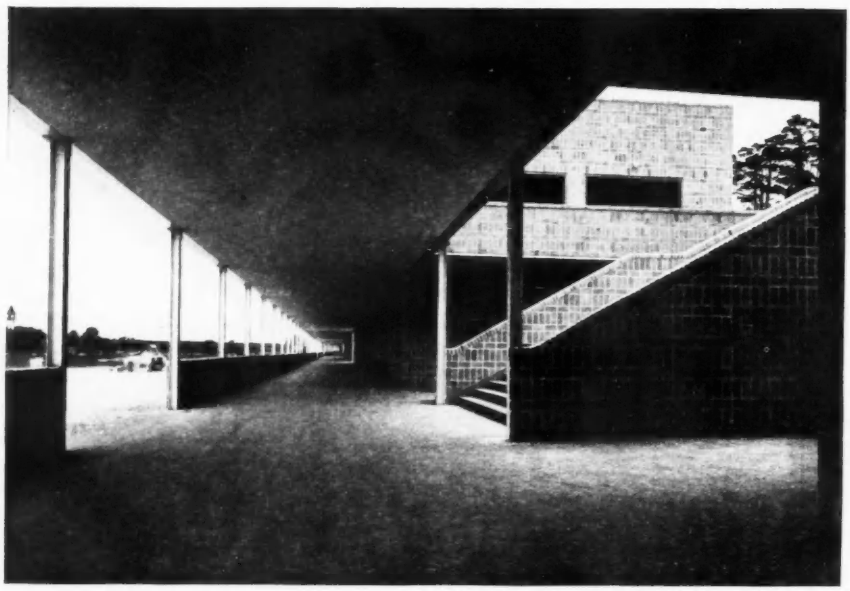


DETAIL ELEVATION OF THE COVERED PASSAGE

SCALE ¼" TO ONE FOOT



GROUND PLAN



[*Martin Wagner and Richard Ermisch. Architects.*

THE COVERED WAY, SHOWING ONE OF THE TERRACE STAIRWAYS

WINDOW & NICHE IN ONE

IN RED HAND-MADE FACING BRICKS AND PORTLAND STONE

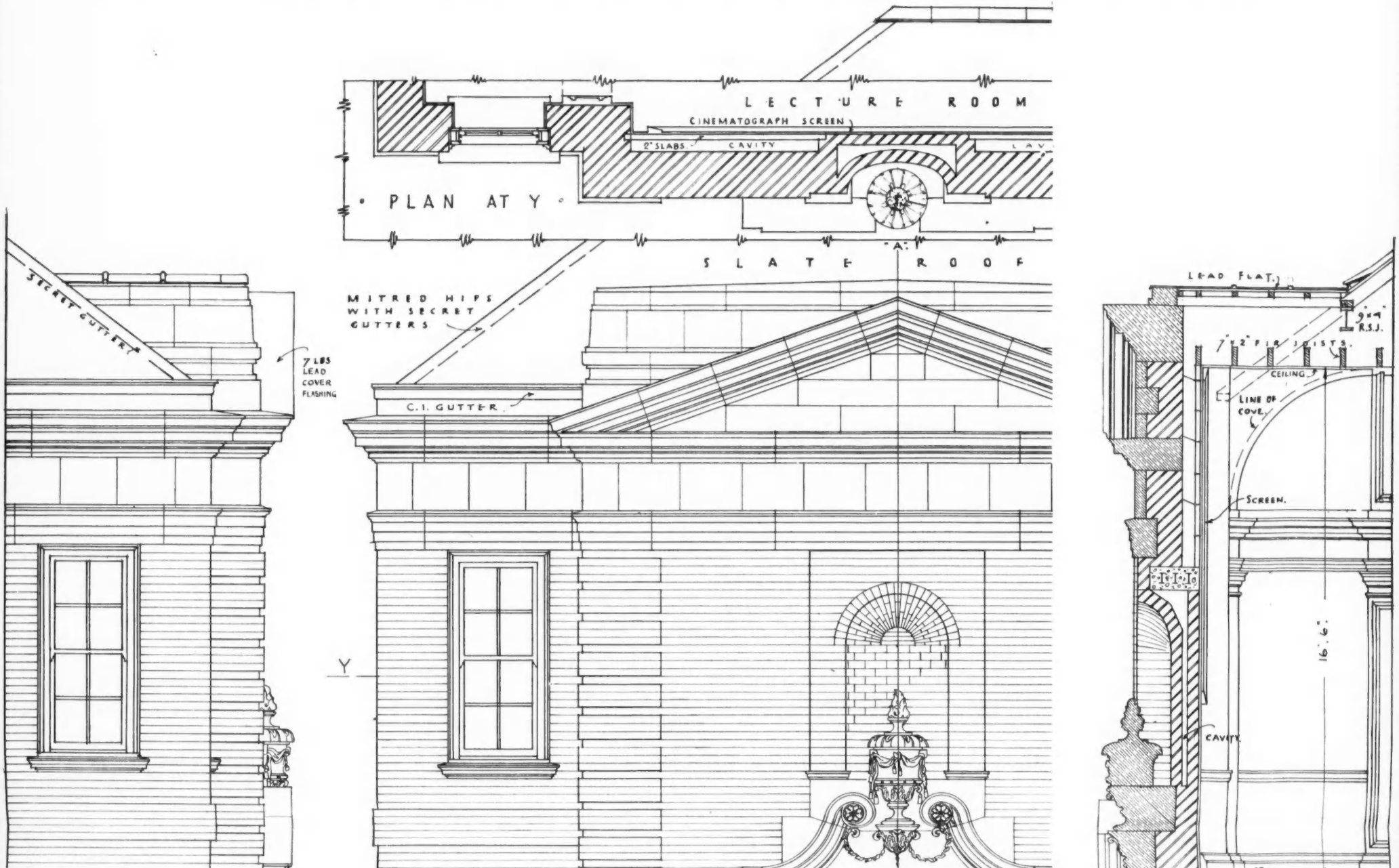
[*T. M. Wilson, Architect.*

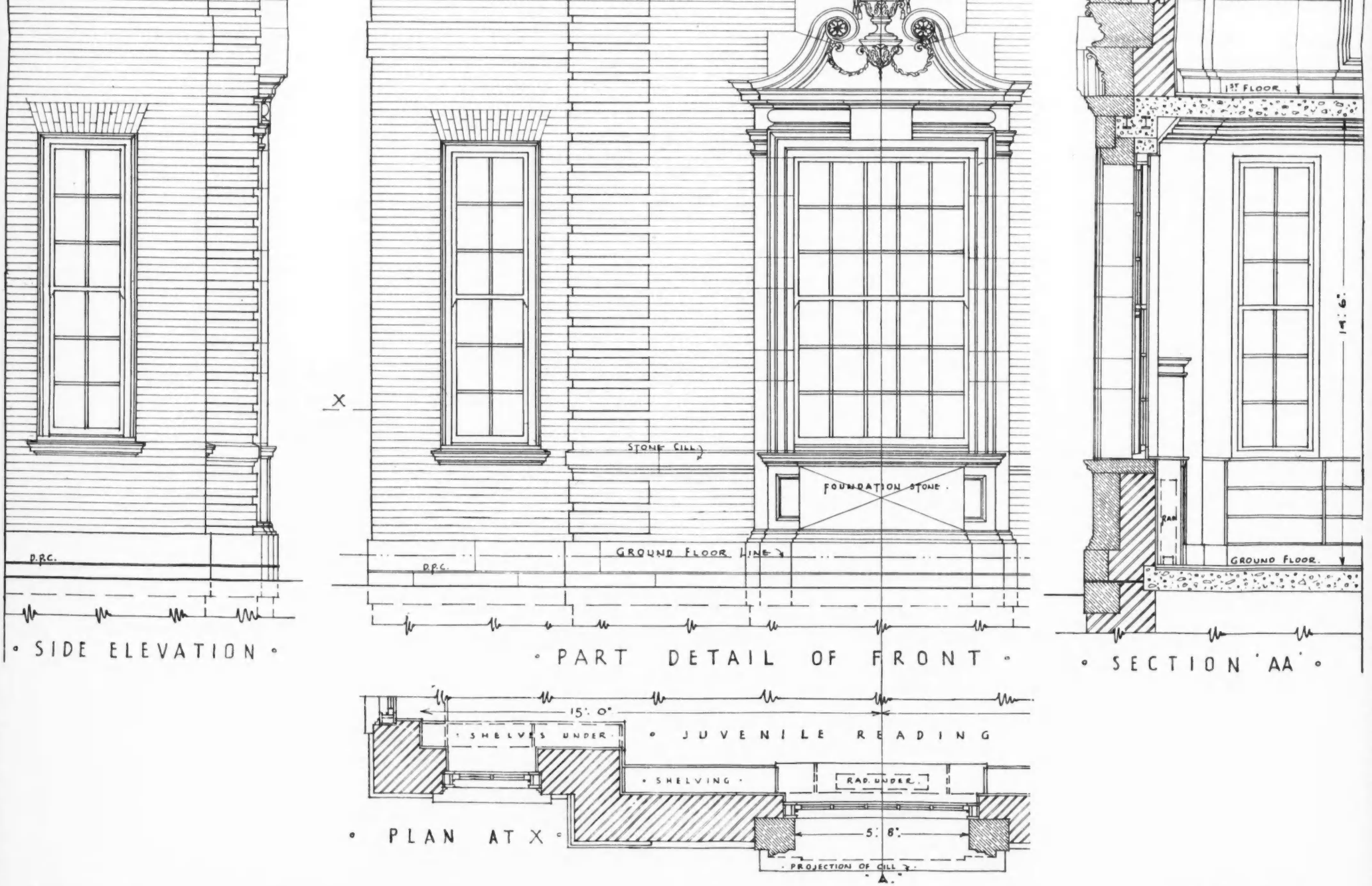
THE WINDOW FEATURE TO THE JUVENILE READING ROOM, HENDON CENTRAL LIBRARY

THE above photograph and the architect's detail drawings reproduced overleaf show a new mode of ornamenting a façade: by the introduction of a combined carved window-head and half-domed niche. There are two of these windows, one on each side of the main entrance to the library, as will be seen from the general view on the last page of this supplement. A. H. Wilkinson executed the carving. The library was fully illustrated and described in "The Architects' Journal" for May 27, 1931.

Supplement to THE ARCHITECTS' JOURNAL for October 21, 1931

CENTRAL PUBLIC LIBRARY HENDON





T. M Wilson, Architect.

[*T. M. Wilson, Architect.*

THE MAIN ENTRANCE FRONT, HENDON CENTRAL LIBRARY

SELECTED PRECEDENTS:

VIADUCTS IN CONCRETE

1. *COLLIERY VIADUCT SIDING, SEUFTENBERG, GERMANY.*

By courtesy of Bauunternehmung Dyckerhoff and Widmann A.-G., Wiesbaden-Biebrich.]

LIKE the great Roman aqueducts which were their prototypes, modern concrete viaducts are impressive by reason of the almost metrical swing of their repetitive rhythms.

The railway brought the viaduct into its own again—more often as a drab sequence of yellow-brick arches than of stately stone piers. Today, the motor road is availing itself of the same model in forms peculiar to concrete. Compared with Continental countries we have still few major examples of concrete construction to our credit, but the Lea Valley Viaduct on the North Circular Road (figure 4) is a fine outstanding exception. Like figures 3 and 5, this is really the prolongation of an ordinary river bridge across a marshy valley bottom liable to be flooded for considerable periods at a time.

Figures 2 and 5 are railway viaducts, 479 and 328 metres long, respectively. Figure 1 is a rather peculiar type of colliery siding. In common with figure 5 it has solid piers; whereas the platform of figure 2 (conspicuously zigzagged with expansion joints) is raised on splayed, peg-top trestles, and that of figure 4 on groups of pile-like columns. All four have rectangular-shaped arches.

Figure 3, which follows traditional elliptical-arch design, though with much flatter spans than would be possible in masonry, was the subject of a limited competition among leading German architects. Since then the plans have twice been altered. At present it consists of twelve arches with a total length of 380 metres. From right to left the first three measure 29·45, 40·75 and 29·45 metres; while the remaining nine (most of which do not appear in the photograph) vary from 22 to 28 metres. This viaduct is shortly to be extended a further 100 metres on five additional arches; while the width of the platform is to be increased from 12 to 18 metres. The two 1·50 metre wide pavements will be taken into the roadway, and replaced by others, double their existing breadth, which are to be cantilevered out from the parapet.

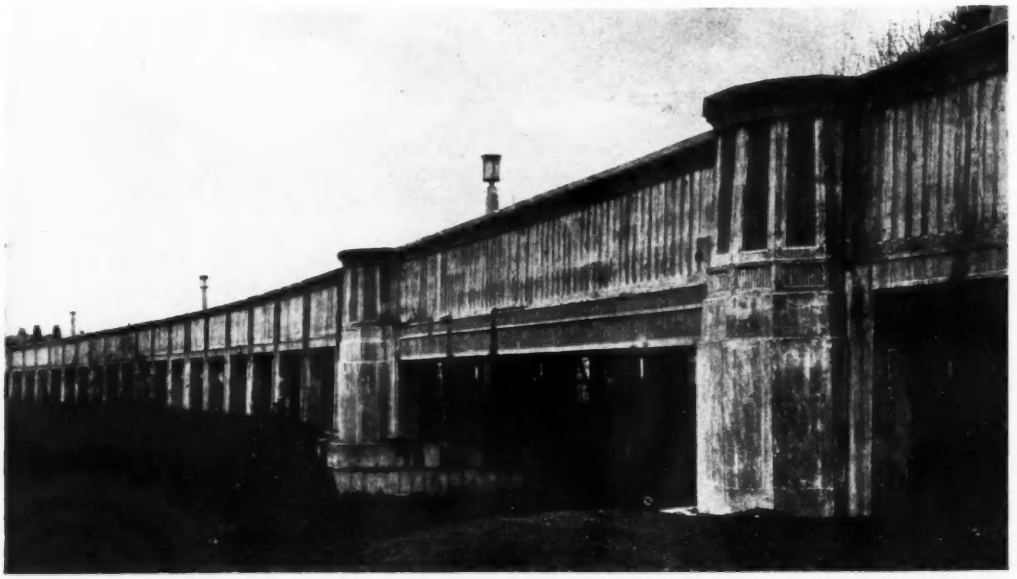
P. MORTON SHAND

[*By courtesy of Christiani and Nielsen, Copenhagen.*

2. *RAILWAY HARBOUR VIADUCT, LENINGRAD (1911).*

[*Professor Fahrenkamp, Architect. By courtesy of Hochtief A.-G., Essen.*

3. *PART OF THE RUHR RIVER VIADUCT, BETWEEN MÜLHEIM AND SAARN* (*1927–30*).

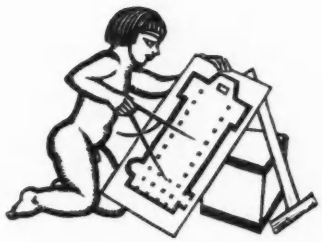


[*Sir John Simpson and Maxwell Ayrton, Architects; Sir E. Owen Williams, Engineer.*

4. *THE LEA VALLEY VIADUCT, ON LONDON'S NORTH CIRCULAR ROAD* (*1927*).

[*By courtesy of Christiani and Nielsen, Copenhagen.*

5. *RAILWAY VIADUCT, RIVER MACUCU VALLEY, RIO DE JANEIRO, BRAZIL* (*1921*).



WEDNESDAY, OCTOBER 28, 1931

CONTROL OF ELEVATIONS

THE first thing that leaps to the mind when this subject is discussed by architects is—whose elevations? Are we speaking of the worst forms of rural desecration, of urban vulgarity, picturedromes and the like, or of more socially exalted buildings?

By what standards are the officials of urban and local authorities to "criticize, approve, or reject plans and elevations for all buildings"?

Are these same officials to use their critical faculties as part of a considered plan of street architecture, arising out of the town plan for the place as a whole? On what are their judgments of the fitness of material to be based? To what criteria will they turn? From what reservoir of knowledge, artistic experience and sensitiveness to architectural form will they draw in pursuance of their high, their magnificent, calling? What is their taste? Where is their education? And who, over the length and breadth of England, are they?

We know, of course, who they are, and that, for all but the officials of a few large cities, the Architects' Advisory Panels are set up to supplement the actual want of knowledge and judgment which the Bath Clause and the Town and Country Planning Bill presuppose so plenteously to exist.

But is not the whole machinery of this control, unless it is to apply ONLY to the lowest forms of unlearned building, constructed to work only in retrospect?

What standards of architectural taste and fitness reside in this country are to be found nearly entirely among architects, and even with them they are insecure and transient. But at what stage in the machinery of this control is this taste and judgment applied, and with what degree of finality? The answer must be that the architect's knowledge is called for at the latter end, and has a moral and persuasive force only.

Or, again, at what stage in the design of a particular building, and in its financial promotion, is the local authority called upon "to consider, criticize, approve or reject the plans and elevations"? Once again, it is at the latter end, when the designer has earned half his fees, and the promoter has estimated nearly all his costs.

What is to happen when in a small town there is about to be built a large super-picturedrome, a housing development, three chain stores, and a cattle market and public lavatory—these last by the official architect himself?

Nothing calls upon the promoters of these projects to disclose their first plans, yet in each case the form and lasting appearance is then decided upon, after which further comments are but scratchings, as likely to take away what character lay there as to add new merit.

We may sound biased in our inquiries, but it seems true to say that no form of building is proposed to be excepted from control, despite the fact that designs of architectural merit can only be judged by trained architects of high standing, or from the standpoint of a well-worked-out plan for a town as a whole. And if control will not apply to the greater, it will be of little use in the lesser, and the value of this control falls to nothing.

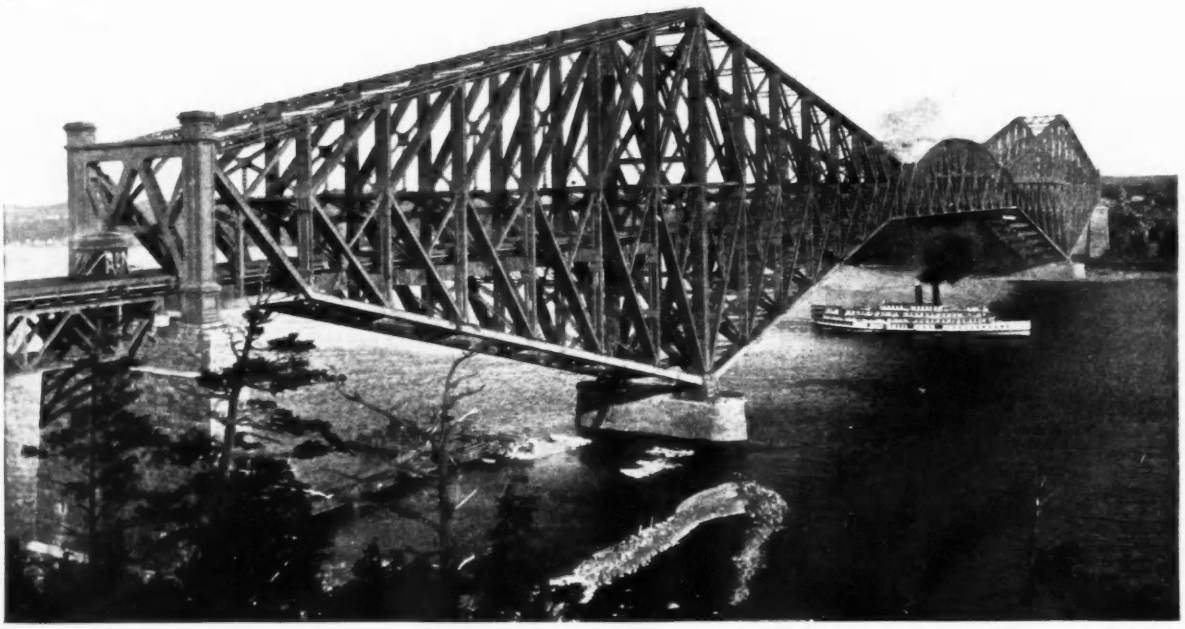
In Germany there may be control, but it is persuasive control, and Germany is a cultured nation, with a vigorous constructive architecture unlike the degenerate weed we are trying so desperately to coax back to life in this country.

Control can in the end be applied only by moral force springing from the acceptance of a high standard of culture and civic pride. These, in their turn, are the results of a desire for order.

The control of architecture must be preceded by the reform of architecture if it is to be applied with results that will be of lasting benefit and not merely a source of annoyance and the cause of expense.

The control over the building of cottages, factories and shops, three very important items in the appearance of both town and country, has largely passed from the hands of competent designers.

The standards of design must be raised, and the necessity for the employment of good designers for these things must become a matter of course, before we can afford, as architects, to allow the control of still further sections of building to pass from our hands into those of local authorities—if, indeed, it should ever be necessary to impose control of æsthetics by force of a legal code.



THE QUEBEC BRIDGE IN CANADA

It is no exaggeration to state that the prestige of the steel structure will ultimately depend, not only upon its practical efficiency, its economy and its speed of erection, but also upon its beauty.

Proof that the men who are in control of the steel industries in this country are well aware of this is given by the publication on the part of the British Steelwork Association of a second volume of *The Steel Bridge*, a book devoted solely to æsthetic considerations, and illustrated, so far as can be, by reference to a number of existing bridges. These vary, as must any range of subjects reaching over several decades in artistic excellence, but they are of great interest in showing the various treatments made possible by the use of structural steel. Among them is the Quebec Bridge, illustrated above, the foreshortened view of which is apt to suggest a massiveness of steelwork which is, in reality, not out of proportion to the enormous span.

To what extent, it may be asked, is it possible for steel to increase its popularity in the architectural domain? Perhaps the best reply is the following, given by the Association itself:

"Many architects, while of course they already employ steel girders to form a skeleton framework for their buildings, yet consider stone and brick to be the only facing materials which possess architectural dignity. The all-metal building has not yet made its appearance, but a number of railway stations, not at all to be despised, were erected in the Victorian era, and show what can be done with glass and steel in combination. The promising beginnings in the architecture of steel have not so far been followed up, but it remains for designers to explore such possibilities further and to discover whether a material so powerful and so pliable as steel may be adapted to the creation of a modern style as subtle and distinguished as any of those which architects have produced in the past."

NEWS & TOPICS

Mr. Percy Webster Adams, of Adams, Holden and Pearson, who captained the Rugby fifteen against the South Africans on October 17; and was elected L.R.I.B.A. on October 19.

THE WRONG KIND OF ECONOMY

THE Prime Minister's declaration of a few weeks ago to the effect that the Government was not intent upon economy of the wrong kind, which places too harsh a veto on the social services, was welcomed as a sign that panic measures of retrenchment would no longer receive encouragement in official quarters. It will, of course, be realized that, during the stress of a General Election, the Prime Minister has no time to see to it that his promise in this matter is put into effect. But we may hope that if and when he is returned to office he will put a stop to the present insane policy of cutting down housing schemes to such an extent that thousands of people living in conditions of appalling squalor have now little hope of relief.

*

The recent decision of the Ministry of Health that under the housing schemes of Local Authorities only houses of the smallest and cheapest type will be sanctioned in future is a complete reversal of the policy advocated by all housing reformers, namely, that the "large family" problem is the one most urgently needing solution. And, as Mr. Henry Aldridge points out in an article contributed to *The Star*, the difference in price between the A1, A2 and A3 types is now so small that to keep from 2,000 to 3,000 men out of employment while new plans are being drafted is the antithesis of all that we mean by national economy.

"THE ARCHITECTURE OF RUGBY"

The game, that is, not the school. It is the simplest truism to say that every outstanding Rugby football player has evinced a strongly developed sense of rhythm. So it would seem to be only in the natural order of things for architects to shine at what the evening papers are pleased to call "the handling code," since architecture is the art of interpreting formations in rhythms of the kind of openings and scrums that are termed voids and solids. Rugby enthusiasts were probably rather disappointed at the form shown by London against the South Africans at Twickenham on Saturday, October 17. Certainly three points to thirty was not on the face of it a particularly impressive display. But that solitary try, the result of a smart recovery initiated by Coote, was largely due, as *The Times* noticed, to good backing up by Adams. I wonder how many readers of THE ARCHITECTS' JOURNAL (or, for that matter, of the sporting columns of the daily and weekly papers) will have realized that the Surrey player who captained London on this occasion was none other than Mr. P. W. Adams, of Adams, Holden and Pearson, the firm to whom London owes its one entirely successful Modernist building: the Underground Headquarters in Broadway, Westminster?

*

It would be interesting to know what other architects have distinguished themselves as Rugby players, or, conversely (and as most people would put it), what Rugby players as architects. The A.A. is an excellent nursery of the game, and in many seasons fields a very hot team—just to show the hospitals that Rugby is not a medical monopoly. Embryo surgeons may excel at "the cut through," just as stockbrokers are unrivalled at "selling the dummy"; but no profession, not even "gunners," should be able to compare with architects in mastery of the technique of those parabolic curves—trajectories so graceful that the emotional Corbusier would relapse into pages of rhetoric about the ballistical beauty of pure form traced in Euclidian space, if someone could persuade him to go and see a Rugby match—which the elliptical ball describes in "finding touch" in your opponents' "twenty-five," or the conversion of a difficult try from far out. But if it comes to that, ordinary bricklayers should have the safest of "hands" at scrum half. It is a thousand pities they waste their dexterous talents at the bootwork of mere "Soccer"—but then trades-unionists always favour any form of Association.

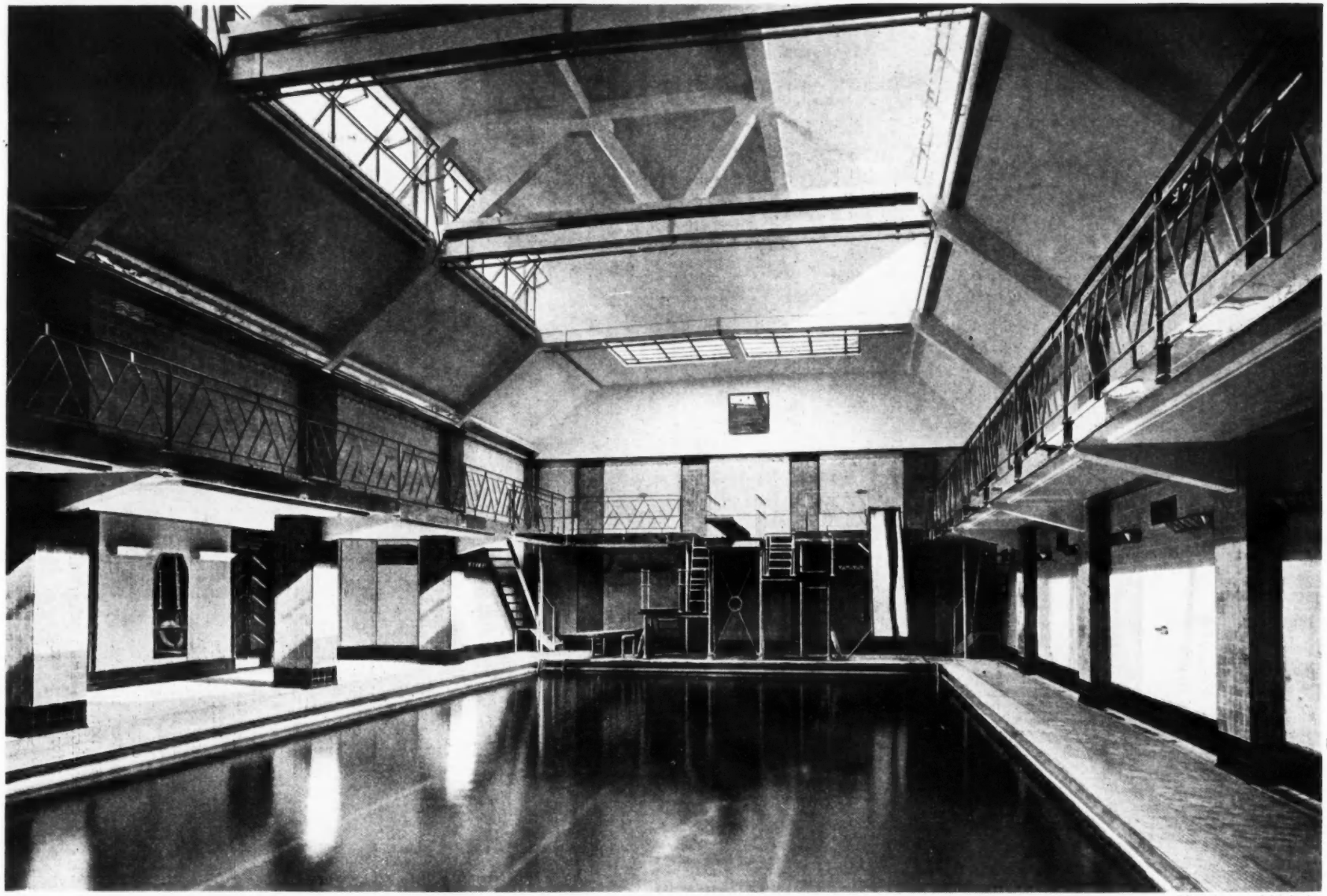
THE TOWN-PLANNING FILM

I went last week to see the German Town-Planning film, which was shown by the London Society at the Royal Society of Arts, and found it an excellent sketch design for the really good town-planning film I look forward to seeing one day. It is extremely interesting and vivid, and the method adopted, that of alternating shots of a scale-modelled town with shots taken from actual examples, brings home the points with force and clarity. You are shown a manufacturing town in the process of haphazard agglomeration, with the evil results in graphic and pictorial detail. Then you are shown on the same site the reasoned processes of town-planning, building the same town in a better way. It is simple, and it is convincing enough to be sent to every school and society that will pay the small rental charged for it.

INDUSTRIAL DESIGN AS A SELLING FACTOR

The D.I.A. held an important luncheon on Tuesday, October 20, when "The competitive value of good design in industry" was discussed by three eminent business men. The luncheon coincided with the opening, at Shoolbred's old store, of an exhibition of foreign-made goods that are sold in this country. The most cheering words came from Mr. Frank Chitham, who, as Managing Director of Harrods, ought to know his subject. He spoke of the increasing importance of design as a selling factor. Price must always count, he said, but style, design, colour and fitness for purpose are in fact more important than price. In support of this statement, he spoke of the new element of risk which has entered into what were once stable lines, and instanced kitchen utensils, once unvaryingly dull and normal, now colourful, better designed and improving themselves every month.

ASTRAGAL



[*By Slater and Moberly.*

SWIMMING BATH IN A HOSTEL

The bath, looking towards the deep end. The railings of the balcony, which runs all round the hall, are of stainless steel. The piers and architraves are faced with blue glass tiles ; the pool is lined with vivid blue tiles, in keeping. There is underwater flood-lighting ; other illumination is all reflected. (See the facing article and the supplement accompanying this issue.)

STAFF SWIMMING BATH

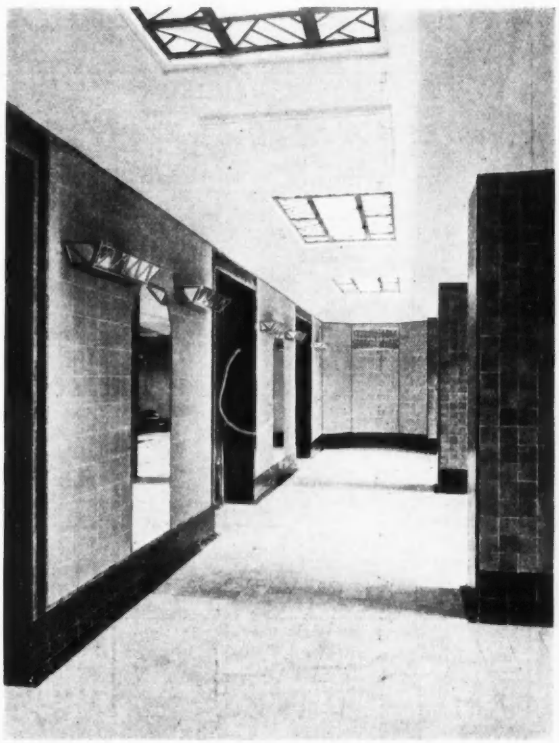
Added to a Gower Street Hostel

FROM DESIGNS BY SLATER AND MOBERLY

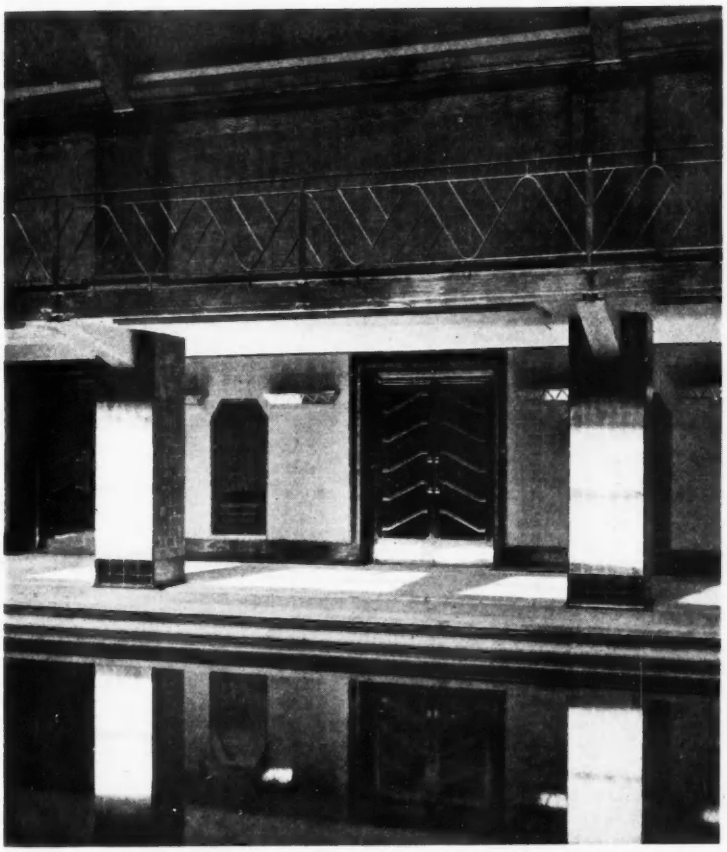
JUST twenty years ago, Messrs. Bourne and Hollingsworth, Ltd., of Oxford Street, completed a large hostel for their staff on a site on the east side of Gower Street. This building was designed upon an H-shaped plan, with two lighting areas, and had for many years the advantage of a vacant site to the south. This site is now occupied by the new premises of the School of Hygiene and Tropical Medicine.

Some twelve months ago Messrs. Bourne and Hollingsworth decided that, if it were in any way practicable, they wished to add to the amenities of the hostel by providing their staff with a swimming pool.

The only possible position for this was in the south lighting area, but the difficulty of access for labour and materials for the construction of so complicated a structure as a modern swimming bath would have been almost insuperable, had it not been for the kindness and neighbourly attitude of the authorities of the School of Hygiene, who, when approached, consented to allow access from their own courtyard, which adjoined the site.



The accommodation terrace. One side of the pool lies to the right; the centre doorway on the left is the exit to changing rooms, while entrance is by the other two, via ablution rooms only.



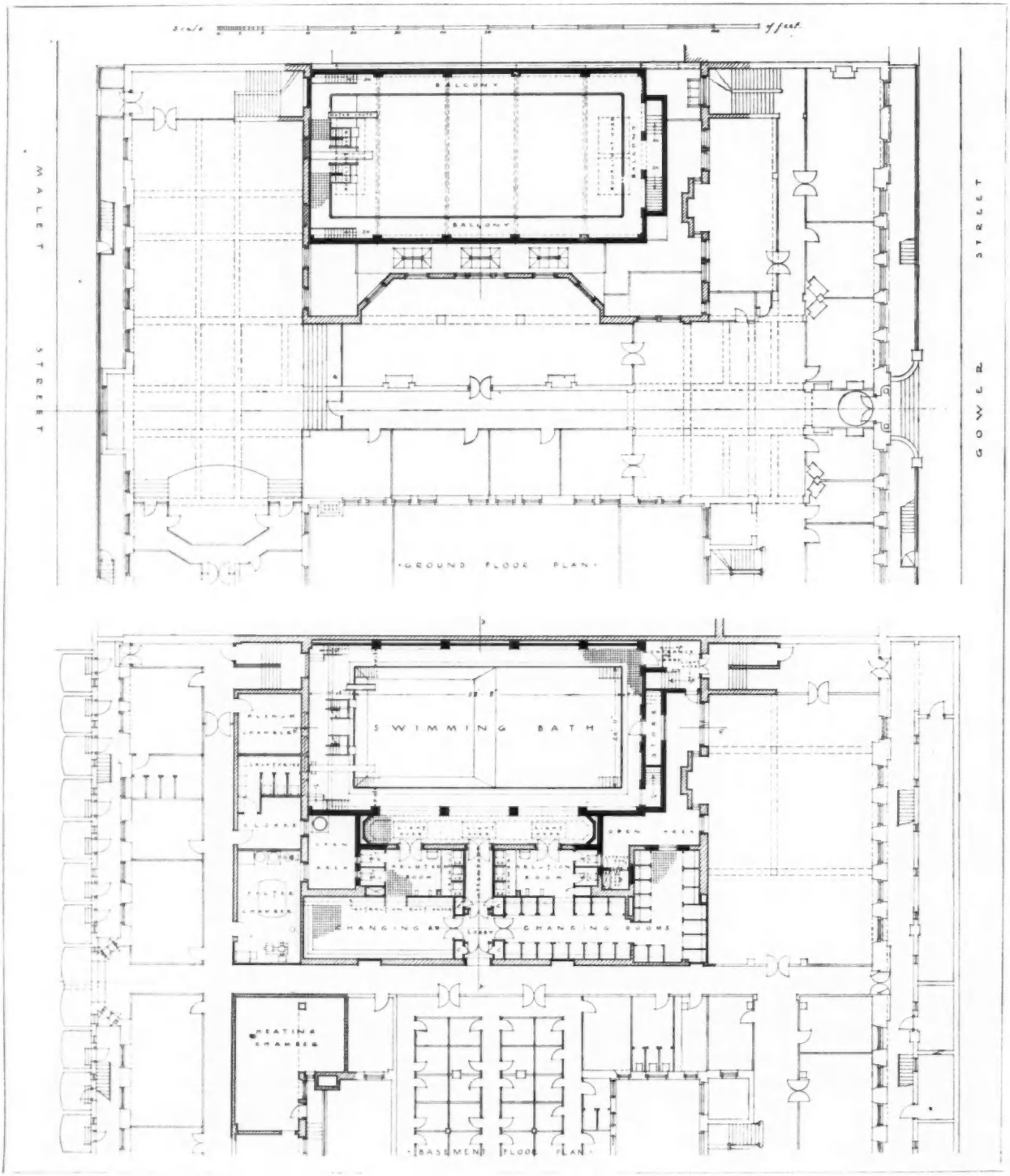
Looking across the bath towards the accommodation terrace, this view shows the design of the doors in the openings shown in the upper picture on this page; there are wall mirrors and light fittings between them.

The problem for the architects was to plan a bath as large as the site would admit, with ample facilities for diving from standard diving boards, without interfering unduly with the lights of the existing building, and without damaging the light and air of their accommodating neighbours.

The drawings show how far this problem was solved. It was decided at an early stage to recirculate the water, a process which involved the usual filtration plant, and, as the exigencies of the site prevented the emptying of the bath to the main sewers by gravity, owing to the question of levels, it was decided to fill and empty the bath by the same pump which was used for the recirculation.

A balcony for spectators all round the bath hall was considered a *sine qua non*. As much daylight as possible was considered desirable, but (as the bath would be actually used largely in the evenings) artificial lighting effects were obviously of importance. The usual central light was therefore abandoned, and clerestory lighting, with lantern lights at the two ends only, was adopted.

By making use of existing rooms in the basement surrounding the original open space, changing-room accommodation was provided, and ablution rooms were introduced between the changing rooms and the bath hall, without trespassing on the space available for the bath itself.



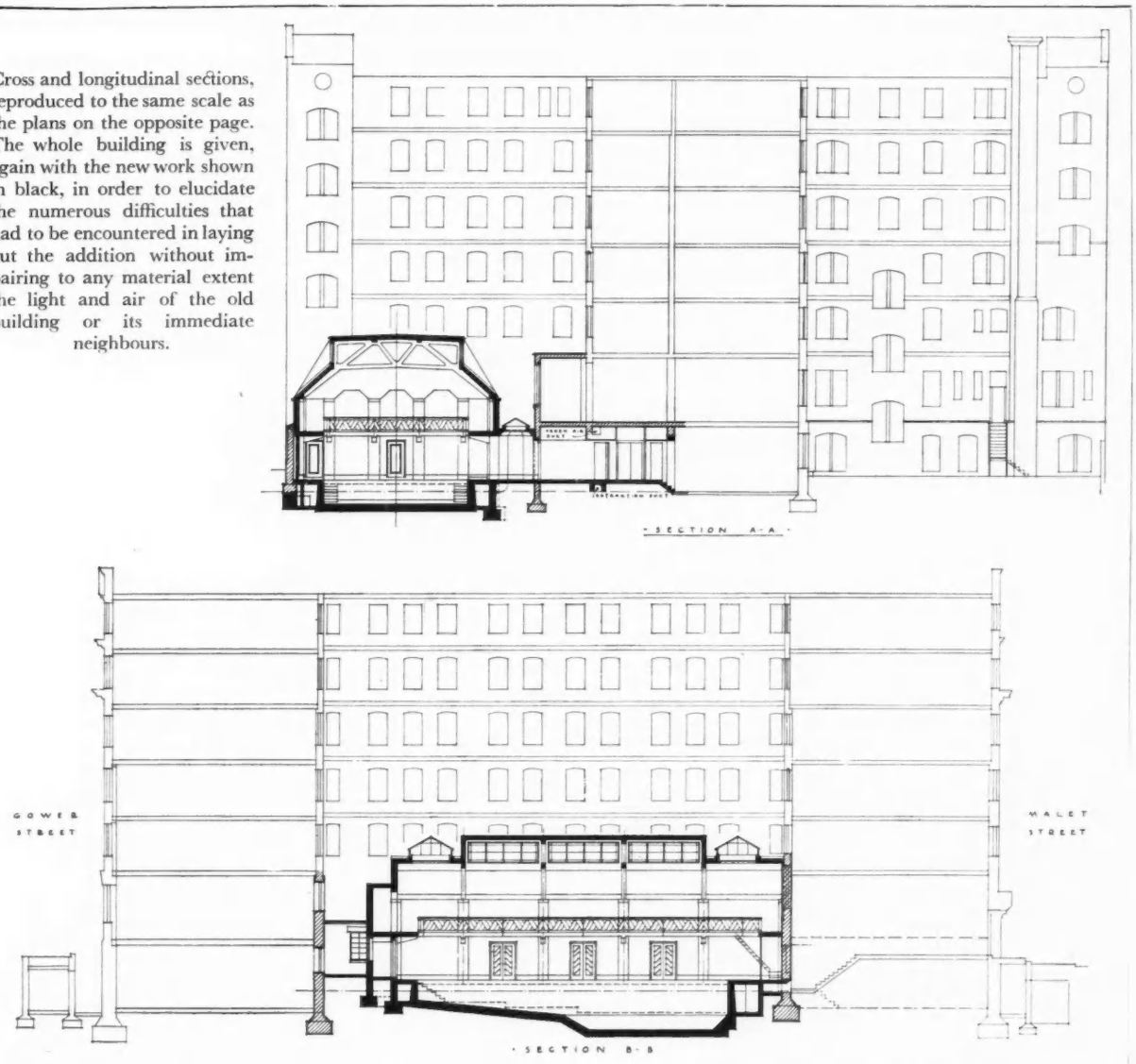
Swimming Bath, Gower Street, W.C.] [*By Slater and Moberly.*

Plans at basement and ground levels. The problem was to add a sizeable swimming pool and the essential changing accommodation within a building twenty years old. This was done by appropriating one of the lighting areas of the original H-shaped plan, and a few of the surrounding rooms. The drawings show the whole of the site: the new work in black, and the old, involved in the addition, hatched.

As far as decorative appearance was concerned, a blue and buff scheme was finally decided upon. After exhaustive experiments, it was discovered that all blue ceramic tiles lost their brilliance in artificial light, and it was decided to employ blue glass tiles, which retained their colour in all circumstances, for the piers and architraves around the various openings.

The inside lining of the bath itself is of vivid blue tiles toning with the blue

Cross and longitudinal sections, reproduced to the same scale as the plans on the opposite page. The whole building is given, again with the new work shown in black, in order to elucidate the numerous difficulties that had to be encountered in laying out the addition without impairing to any material extent the light and air of the old building or its immediate neighbours.



Swimming Bath, Gower Street, W.C.] [*By Slater and Moberly.*

glass tiles. Special non-slip tiles were used for the floor of the bath surround. Stainless steel was employed for the balcony railing and the doors to the bath house. The bathing boxes were made of ebonized mahogany, with stainless steel fittings.

Panel heating is employed under the balcony soffits, as well as low-pressure hot-water pipes under the clerestory windows and in the lanterns, and the problems of condensation are minimized by continuous changes of air by means of a plenum plant discharging under the balcony and extract fans in the roof. The whole of the external walls and roof slopes were also insulated with 1-in. thick wall boards for the same reason.

The artificial lighting has been carried out entirely by reflected light off plane surfaces of concrete painted with plastic paint, and four distinct sources of light are employed which can be combined or used separately at will :

a : The water of the bath itself is illuminated by eight 500-watt floodlights fitted in the sides of the bath.

b : The soffit of the balcony is lighted by isolated fittings of stainless steel and blue enamel, fixed to the walls.

c : The sloping portions of the roof are similarly lit by continuous bands of lights running from end to end of the building.

d : The flat roof is lighted by bands of light fixed to the bottom booms of the roof trusses, which are cased in concrete.

One of the supplements with this issue is devoted to a further illustration of the bath-hall

New Material Issue

The next issue of THE ARCHITECTS' JOURNAL *(November 4) will be a specially enlarged number devoted to the New Materials. Among the subjects and contributors are :*

"Materials for Architecture," by Wells Coates.

"Plywood," by J. Murray Easton.

"Modern Synthetic Facing Materials," by Raymond McGrath.

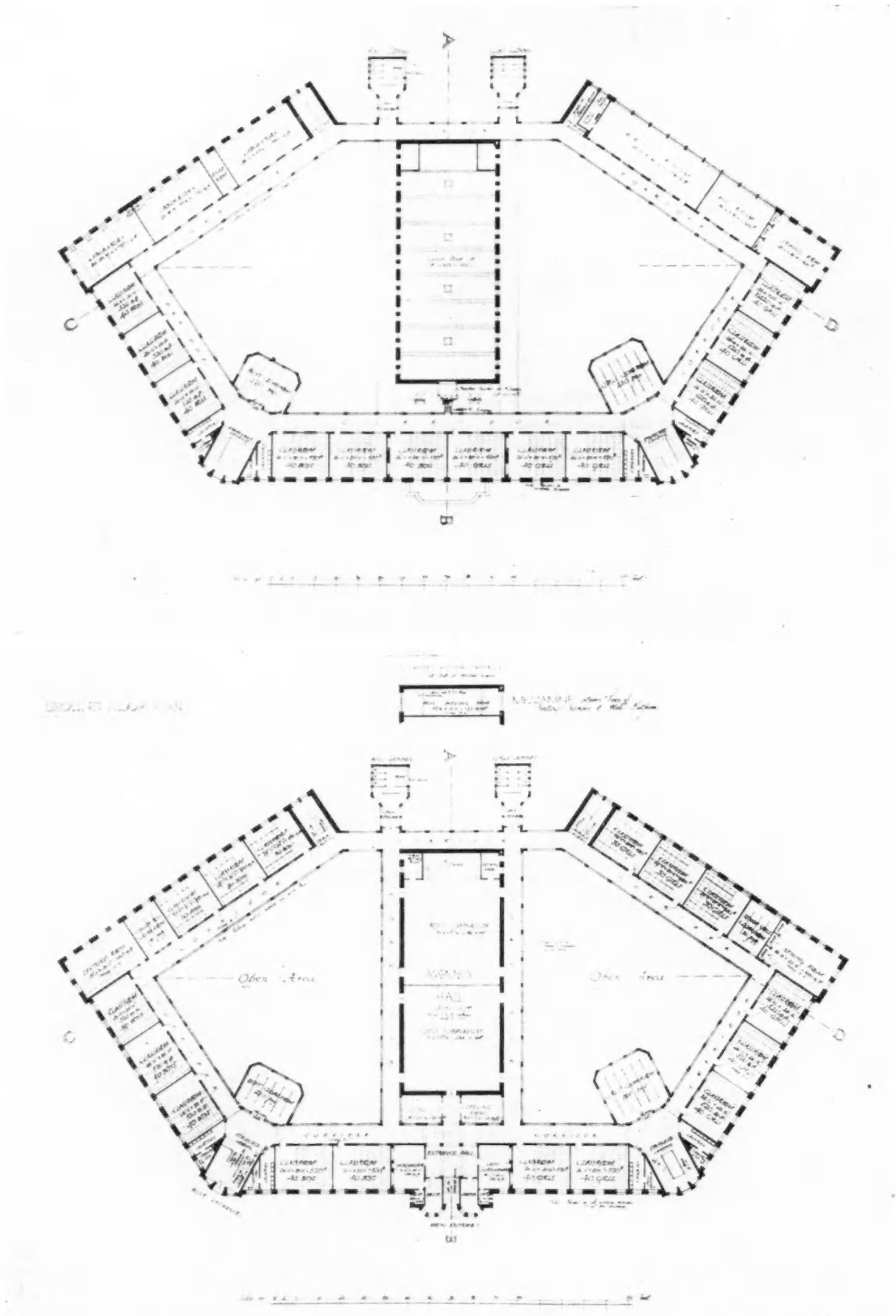
"The New Metals," by A. H. Hayes.

"Modern Floor Coverings," by Ll. E. Williams.

"Wall Boards," by Fredk. Etchells.

"Modern Paints and Decorative Finishes," by Harold Tomlinson.

"Noise and its Absorption," by Hope Bagenal.



Logie Central School, Dundee.] [*By Maclaren, Soutar and Salmond.*

Ground- and first-floor plans. There is also a lower ground floor containing a dining-room and accommodation for educational handiwork, cookery, laundry and instruction in household management. An assembly hall, illustrated on page 560, twenty-eight classrooms, two art rooms, and three laboratories are included on the upper floors.

LOGIE CENTRAL SCHOOL, DUNDEE

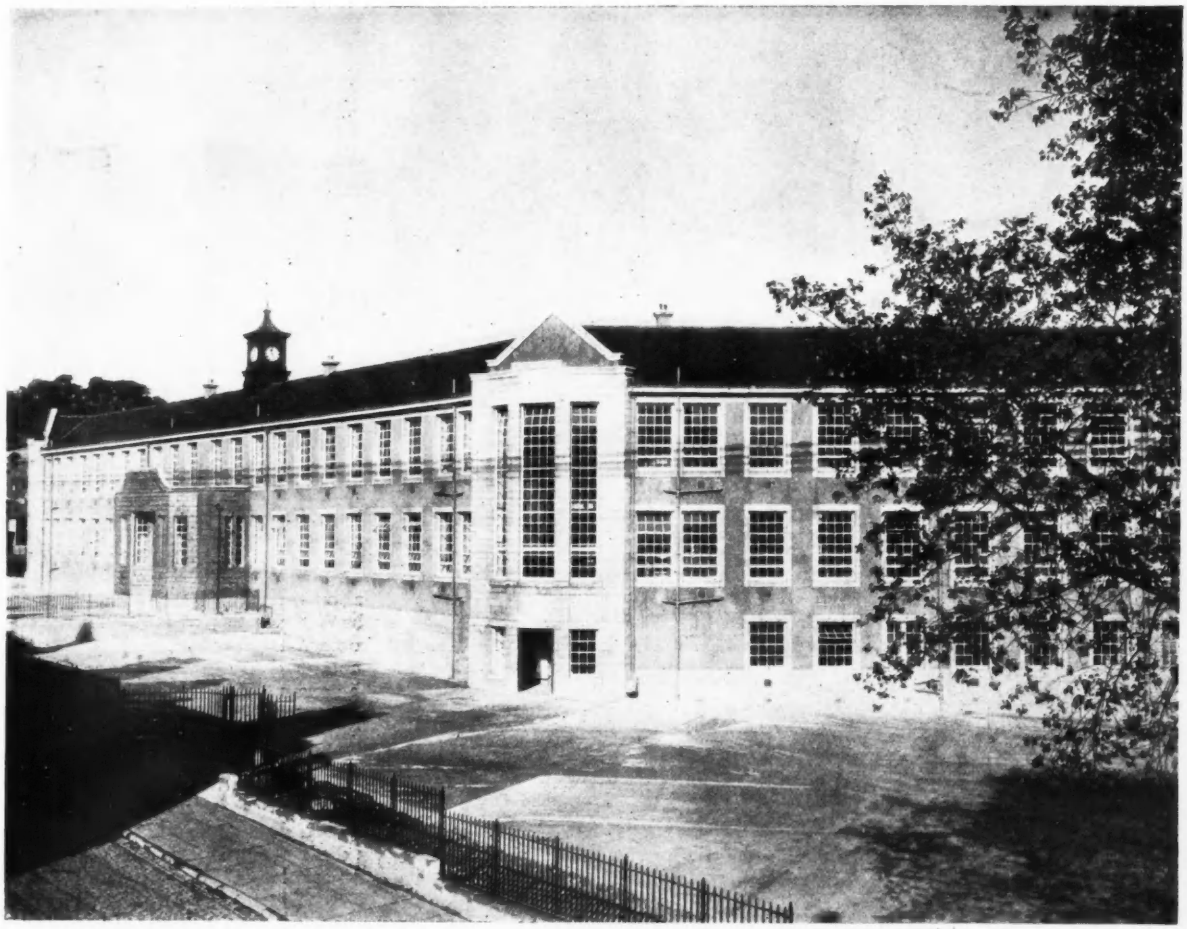
DESIGNED BY MACLAREN, SOUTAR AND SALMOND

IN this school accommodation is provided for 1,020 pupils passing through the intermediate stage. The design won first place in a competition, promoted by the Dundee Education Authority and limited to architects practising in Scotland. Mr. John Arthur was the assessor.

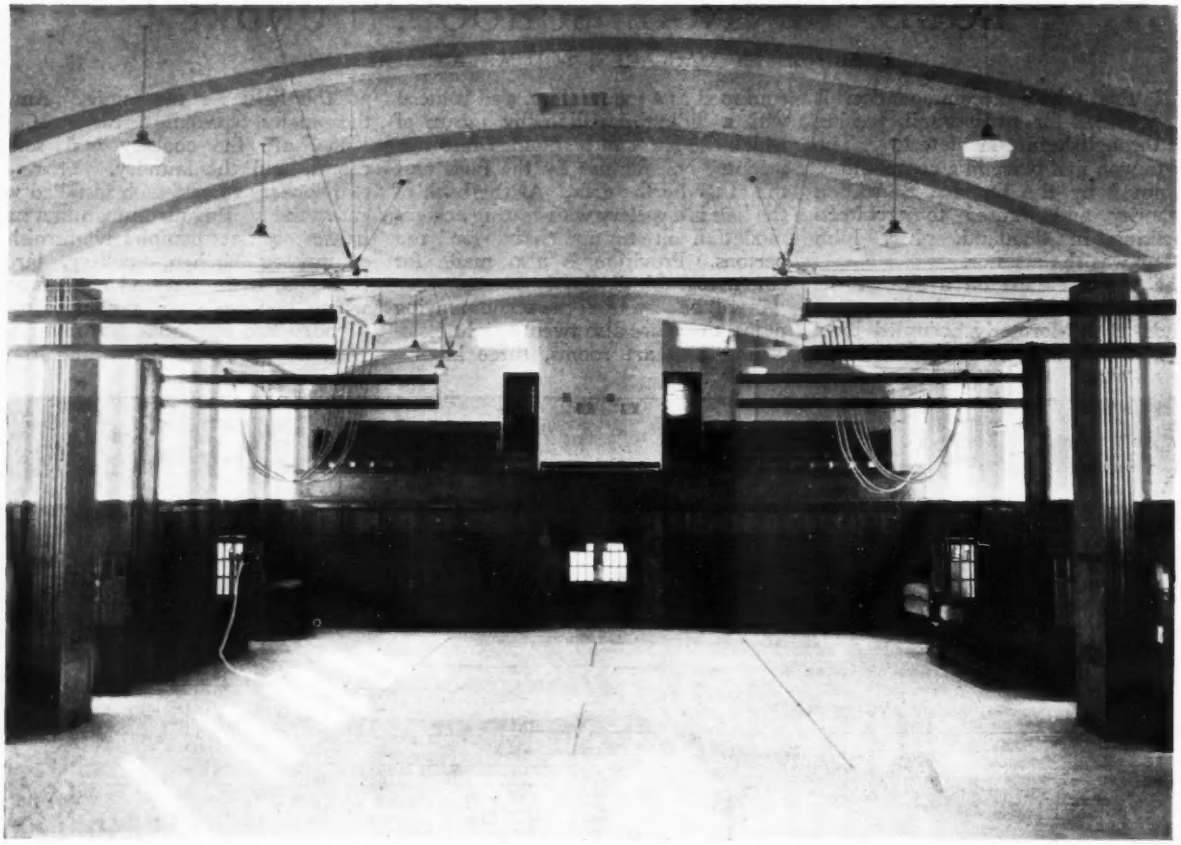
The school stands on a site at the corner of Blackness and Glenagnes Roads, a site formerly occupied by a block of buildings known as Western Poorhouse and used during the war as a military barracks. It consists of a lower ground and two upper floors. At ground level the main entrance leads direct to the assembly hall, which forms a central division between the classrooms for the boys' and the girls' departments; and two other entrances, one for boys and one for girls, are placed one on either end of the principal front. The assembly hall is equipped as a gymnasium, and is fitted with a sliding partition, by means of which the hall can be divided into two sections, one for use by the boys and the other by the girls. At the back of the hall is a gallery with seating accommodation in tip-up chairs for 120 persons. Provision is also made for cinematograph displays.

As will be seen from the accompanying plans, there are also twenty-eight classrooms, two art rooms, three laboratories, and accommodation for educational handiwork, cookery, laundry and household management instruction, a school library and medical inspection rooms. The classrooms are on the two upper floors, and are planned around two open quadrangles on either side of the assembly hall, with enclosed corridors or verandas. Special care has also been taken in the planning of the two art rooms to obtain the best possible light for the pupils. Among the many special features of the school are the cookery and sewing rooms, and the laundry. There are two cookery rooms, each installed with gas as the heating medium, and a small house or flat completely furnished, comprising kitchen, scullery, larder, bedroom, bathroom and napery press, where housewifery is taught. In the laundry are gas boilers, twenty tubs with hot and cold water, and ironing tables with electric irons. The sewing classrooms are equipped with cupboards for each pupil, having drawers with divisions, and hanging cupboards to prevent garments from being creased.

Other features are the joinery and metal workshops. These are equipped with machinery such as saws, turning lathe, a crucible, boring machines, etc. Adjoining is a furnace room with anvil. Gas is used instead of the ordinary fuel.



The main front, showing the corner entrance to the girls' department. The deep triple window lights the staircase. To the left is the principal entrance leading direct to the assembly hall; and beyond, at the other corner of the building, is the boys' entrance. The school accommodates 1,020 scholars.



The assembly hall is equipped with gymnasium apparatus and a projection box and screen for the display of cinematograph films. A gallery at the rear provides seating, in tip-up chairs, for 120 persons. A sliding partition enables the hall to be divided into two independent sections, for the use of boys' and girls' squads.

Logie Central School, Dundee.] [*By Maclaren, Soutar and Salmond.*

Looking from the girls' staircase on the first floor along the corridor towards the boys' staircase. The corridor runs round all the six inner sides of the school.

It is also notable that the three laboratories, two for scientific and one for electrical study, and the two science rooms, have ample store-room accommodation, also fume cupboards to take the gases from any evil-smelling liquids which the young scientists may concoct during their studies.

Accommodation is also provided for the medical attendant, and comprises inspection room and waiting-room, and a special dark-room. There are also a dining hall, with kitchen and servery, for scholars living a distance from the school, ample cloakroom facilities for boys and girls, and a bicycle shed.

Throughout the school a system of natural cross-ventilation has been adopted. The heating system is by low-pressure hot water, and there is also a boiler for supplying hot water for the laundry, etc.

R.I.B.A. Final Examination

The following are the dates on which the forthcoming R.I.B.A. Final Examination will be held :

December 2 to December 10, 1931, inclusive. (Last day for receiving applications : November 2, 1931.)

Bernard Whistlow, F.R.I.B.A. : An Autobiography : xxiii (conclusion)

THE SWORD FALLS

BY KARSHISH
(H. B. CRESWELL)

IT is not to be thought that my years of private practice at Nollingborough were unhappy because the social manœuvrings upon which I largely depended for commissions were irksome and ugly. It was only after I had turned my back upon all that life that I realized how exacting the social activities it involved had been; for I was in those days possessed of the resilience of early manhood. Nancy—my wife and colleague—was perpetually cheerful, and my success was by leaps. For five years my gross earnings averaged £2,844, and my net profits more than £2,000. Nancy's private income was about £400, and we spent £1,200, so that, after paying life assurance and income tax, I was able to put by more than a thousand a year, and before I was forty-five I had saved nine thousand pounds, in spite of having spent considerable sums in furnishing and setting up house.

Before the war, a married couple living in the country and spending £1,200 a year were well-to-do : and though we might have spent much less and been the happier, I should certainly, in that case, not have put by so much or been nearly so prosperous or well secured in my profession; for the five hundred or so we squandered in making a splash was an investment, and I might have made out a plausible case for including it as part of my office expenses in income-tax returns.

It cost nothing, and was all in the day's work, to keep the table in the hall well baited with the visiting cards of socially eminent acquaintances; to decide to repulse an offer of apples from the Rector's orchard as compromising our patronage of the Church; to see that photographs of Nancy and two of her girl friends standing (secretly) on books in their presentation trains and ostrich plumes, were prominent on the drawing-room table and the silver frames well polished; and that "Bogie"—a cabinet photograph of a sad, hairy little old man, who was an Irish baron and a distant connection of Nancy's, in the robes he wore at King Edward's coronation—was well displayed. When, however, Nancy decided that I ought to hunt, it was a different matter. This was a considerable item in the cost of our establishment, but, as usual, Nancy was right. It undoubtedly pays an architect to hunt. I had never been on a horse since my boyhood at Yaw, where I had the occasional use of a pony for many years; but Nancy egged me on, and after I had attended a riding-school in London, she passed me as presentable. There was stabling and a paddock with the house we rented, and we bought two steady, aged hunters for a little over a hundred pounds, joined the South Warrops Hunt, and for four years I hunted, as the word was understood by seventy per cent. of the fields of five hundred that sometimes attended the meets of two neighbouring packs of foxhounds—that is to say, I wore spotless pipe-clays, beautifully tailored coat, well-ironed hat, white buckskin gloves, starched stock and a bunch of violets; went out nearly twice a week to tittup along drifts and farm roads, unhook gates, sometimes gallop a field or two and jump an easy gap; saw something of the sport and played the social game for all I was worth.

At the hunt ball, I, like others, wore pink, as I did not mind being conspicuous *there*. Once, when I took a scratch across my face from a hawthorn, I felt a devil of a fox-hunter and rejoiced in my wound like a German duelling student; and when I once was cannoned off at a gap and bashed my hat and got plastered with mud, I rode round to the far side of the town and through it to my office to parade my sporting hardihood and relish the envy of the townspeople at my social eminence. The worst accident I had was when Julep unexpectedly threw up his head in the stable-yard and knocked out four of my front teeth. This revolting disfigurement, as being the result of an accident in the hunting-field, was a great recommendation to me; I, unexpectedly, found myself in request, and as it was five weeks before dental replacements could be made, I got considerable benefit from the hurt, and, if I may generalize, would say that it pays the hunting architect to lose his front teeth.

I used to chafe at the time I gave to this pursuit as I did at that I lost attending lawn tennis parties, far and wide, in the summer; but I loved those winter mornings, and the flavour of them, and the scene, and the horn of the huntsman and the cries of men and of hounds, are a treasured possession of my memory and a constant source of happiness and of contentment of mind, even when I forget who shared those pleasures with me. I used to motor to the office more or less in hunting kit; deal with the letters; go round the drawing boards and then pick up Nancy and bustle off to the place to which Geoff had gone on with the horses, where we would mount and leave Geoff to take the car back and get on with trenching the celery or some other of his many duties.

Nancy, as I have said, had let herself go after the bad toss she took, and made no attempt to face the jumps, so that we were two of a kind; but she was remembered as a straight goer in the past, and was hail-fellow-well-met with the best of the mob. I took rank as her escort and was received on a footing which my prowess as a horseman would never have given me; and the position I thus won, and the intimacy with Nancy's many friends that resulted, were an enormous advantage to me. Although the work I got to do was for the most part small jobs that were neither very interesting nor very profitable, I was kept busy and had many opportunities of exercising my full capacities and of building up the reputation of being a good architect, which the acceptance of some of my designs at the R.A. exhibitions did much to enhance.

The most important work I did during my Nollingborough days was the rebuilding of Tamberton Manor for the Duke of Bamfort. This opportunity I owed entirely to Nancy. The agent for the Duke's Huntington estates was a dry, methodical, cautious old man; and though we had, with some difficulty, managed to get him and his wife to dine with us, and they had returned the compliment, I could never get on terms of intimacy with him; but Nancy, with infinite trouble, foreseeing that it might be of great advantage to me, made a complete capture of the wife. Mrs. Peterson was twenty-five years older than Nancy, her two sons were in remote parts of the Empire, and she had no daughter. The relationship Nancy set up was that of a young inexperienced married woman, needing the guidance of an elder, and she was perfectly charming to Mrs. Peterson.

The whole thing was a horrible nuisance, for Nancy not only asked Mrs. Peterson's advice, but *took it*, so that I was even put to the trouble of altering the arrangement of the flower beds in the garden. We never knew at what moment the old lady might not appear and, though she had not nearly such a good position socially as we had, Nancy submitted to being even patronized by her. Nevertheless, the wisdom of all this was proved when one day Mrs. Peterson bustled in to give us first news that Tamberton Manor, which had been untenanted for many years, was to become the winter residence of the Duke's heir,

the Marquess of Goulash; and that she had "made Henry promise" he would recommend that I should be consulted in the matter of the alterations that would be necessary.

The original Tamberton Manor had been entirely effaced. It had first decayed to being a farm, and had then for hundreds of years been subject to haphazard alterations and additions to fit the needs of successive generations of dowagers and younger sons until it was a shapeless agglomeration of hand-to-mouth expedients, indifferently built and without any architectural consciousness.

The house, in fact, merely encumbered the site; and it would have been better economy, and but little more cost, to have cleared the whole of it away. That was not done because no opportunity was given me to propose anything so drastic, and it is because of the circumstances that denied me that opportunity, and because I have, by the experience, since been able to guide clients to wiser courses, that I mention the house at all; for though I was successful in entirely satisfying those who employed me, the new house is so tormented by certain foundations and walls of the old which are embodied in it that the resources of architecture (as available for me) are defeated, and the design has no expressiveness. Tamberton Manor is merely a big house—I hate the sight of it.

The circumstances which led to this unhappy result—and which often lead to similar results — were that the problem presented was never faced, but was disposed of by a process of advancing piecemeal from one consideration to another. Dukes are autocratic people, and when I found I had Peterson on my side in thinking a more comprehensive approach to the subject clearly advisable, and said to His Grace: "Mr. Peterson thinks it would be wise to consider—so-and-so," His Grace replied with promptness: "Damn Mr. Peterson," and I felt it unnecessary to press for the like dedication of myself.

The matter was complicated by the prejudices and sentiments of several members of the family, and I shall sufficiently indicate the way in which these were gradually dislodged when I say that I was first asked to report on the cost of an inventory of improvements prepared by the clerk of works of the Duke's chief estates, which included an item: "Fix rail in lavatory by first floor side passage to hang a towel on," approved by the word "good" in the Duke's hand; and that at the end of three months I received instructions to get out contract particulars under my estimate of thirty thousand pounds.

I cannot in this connection resist recording an exploit of my clerk, although the story is against myself and is a grotesque comment on my social preoccupations. Bellis, my typing and general clerk, was the sort of ass who is yet no fool. He would confidently type words belonging to no language on earth if he thought I had uttered or written them, and nothing was too unimportant for his attention except really important things. The office, in fact, was an elephant on whose back Bellis crawled with the minute concentration of an ant on what lay under his feet; but he was the soul of loyalty and conscientiousness, could put his hand on anything, instantly, and the joy of his life was to be able to hand me my pen before I had time to reach for it, or to find I had left my pipe in his office before I knew I had lost it.

One of Bellis's duties was to organize the distribution, by the office boy, of tea, in the afternoon. A day came when Goulash was to call at my office to discuss preliminary sketch plans. I had met him once at the Duke's head agent's in London, and had cadged a nod from him in the hunting field. Bellis was enormously impressed at a live Lord's coming to the office, and no doubt he noticed that I wore a lounge suit instead of the breeches and leggings with which I commonly sought to cut myself off from other professional men in the place. He followed with zest my directions for tidying up the room, arranging it for the interview and garnishing it so as to make it seem the abode of a man of cultivated leisure —for I was ashamed of the implications of squalor in my obscure backwater of the abject little town—and his native solicitude was tuned up to snapping point, so that, apparently, he presented to himself the very difficult question: "How much milk does a Marquess take in his tea?"

The great man came, and we were standing with our heads together at the drawing bench when Goulash signed to me that my attention was wanted, and I looked round to see Bellis hanging forward into the room, with one hand on the handle of the door and the other behind the jamb like a very polite ticket-inspector asking of the first class—"All seasons."

"What is it?" I asked; annoyed that there should be any reason whatever for interrupting me at such a moment.

Bellis mumbled with an air of mystery and secrecy, as though it was important he should not be overheard.

"I can't hear what you say," I said.

"Shall I get a pen'oth of milk or three ha'poth, sir?"

I made a wide sweeping gesture of pushing the poor man from me, and he retired with his problem unsolved. He had never before asked me about milk, which I only knew of as an item in his petty cash; but his anxiety to honour the occasion with a solicitude more microscopic than ordinary gave me the sensations of a silken, be-ruffed, strutting, Elizabethan courtier, suddenly aware that the bran has run out of his trunks.

It was just after the completion of Tamberton Manor that the same inscrutable edicts that had built my fortunes began inconsequently to tear them down. For no fault of my own, I had, one after the other, several of those disappointments of which all architects have experience, when the plum within grasp is snatched away. A client died just after he had instructed me to get out sketch designs for a new house; a house I was altering was burnt, and the consequent business troubles were wearying and all building projects abandoned. A church which I had good reason to expect I should be asked to design was entrusted to another architect, owing to the Rector whose good offices I relied on being called to another living. At just about this time, acting on a hint given me by a friend, I discovered that my confidence in my office staff was misplaced and that they took advantage of my considerable absence from the office. I found I was being cheated in all sorts of ways by men leaving the office, playing chess there and clearing the floor for games; and then the shattering blow of my life came, for Nancy became seriously ill and, after a long struggle, died.

This was early in 1913; and before the war came to put an end to my work, close my office and call me to other work in other places, I had learnt how irreparable my loss was. My hold on life seemed to relax; I seemed to be regarded as belonging to the past in which my mind lived. Nancy had borne the brunt of the battle as we understood it. A house which was not her home was a desert for me: I left it. Nothing seemed worth the striving for, and I could not understand why I had ever thought it was. I drew more and more into myself, and the daily round of my work was, if not entirely joyless, automatic. It may have been well for me that the war tore me up by the roots from ground where, four years later, I could no more have replanted myself than a tree could.

A new life and a new field of activities lay before me: these also now lie, for the main part, behind; but as one grows older one gets a more solid and complete satisfaction out of life. One learns that happiness is within oneself and not dependent on outside circumstances; that the beautiful things of life are the property of all who have the small wisdom necessary to recognize them; and that to desire nothing is to possess all.

THE END

INCOME TAX, 1931—32

Important Changes for the Current Year

BY M. L. HARGREAVES

THE alterations in the allowances, rates, etc., which have recently become operative by the introduction of the Supplementary Budget are retrospective to April 6, 1931, i.e. they take effect during the current year.

The most important alterations will easily be ascertained by the comparative table set out herein, as compared with those for the previous year, 1930-31.

	1930-31	1931-32
Personal allowances :		
Married	£225	£150
Single	£135	£100
Widow and Widower	£135	£100
Housekeeper	£60	£50
First child	£60	£50
Second child	£50	£40
Twins	£110	£90
Each subsequent child	£50	£40
Reduced rate ..	£250 at 2/-	£175 at 2/6
Dependent relative ..	(no change)	
Earned income allowance must not exceed	£250	£300
Earned income allowance	one-sixth	one-fifth
Insurance premium rates	2/3, 3/4½ and 4/6	2/6, 3/9 and 5/-

The standard rate of income tax will be 5s. in the £.

To gross up one's dividends for the year under review, take the net figure received, and add one-third to it. Thus, if £9 were received net from a dividend, the amount to be entered in the appropriate section of the form would be £12 (£12 less tax at 5s. in the £ = £9).

With regard to the cases in which adjustments may be necessary to make good the deficiencies in the amounts of tax deducted from payments made before October 15, 1931, which fall into the two classes below, one cannot do better than write to :

The Secretary,
Inland Revenue,
Somerset House, W.C.2

for the circular which has been issued, showing how the adjustments necessary are to be made.

The two classes referred to above are :

1 : Tax deducted directly on behalf of the Revenue from payments which are not made out of profits or gains brought into charge to income tax.

2 : Tax deducted from payments made out of profits or gains brought into charge to income tax.

With regard to payment of tax the following rules will be in force :

Income Tax Schedule "A," 1931-32

The whole of the tax will be due and payable on January 1, 1932.

Income Tax Schedules "B," "E," and "D," 1931-32.

Three-quarters of the tax will be due and payable on January 1, 1932 (extended to March, 1932, in proved cases of hardship).

One-quarter (balance) on July 1, 1932.

There will be no change with regard to the rate of payment of surtax for 1930-31, except that there is an increase in the tax payable amounting to 10 per cent.

It will be observed that the only beneficial changes in the allowances, etc., are the earned income allowance, which, on an income of £540, is increased from £90 to £108, and in the rates applicable to allowances in respect of payments for life assurance premiums, which have been increased by 3d., 4½d., and 6d. respectively.

QUESTIONS THAT ARISE

Defective Water Pipes

F. B. writes : "*Five years ago I acted as architect for the erection of a subsidy house for a private client. There was no bill of quantities. The specification gave the bores of the lead water pipes which were to be 'of the weights required by Local Authorities.' The R.I.B.A. Form of Contract used also included the following clause : 'The Contractor shall conform to the . . . regulations and Bylaws of any Local Authorities and of any Water and Lighting Companies with whose systems the structure is proposed to be connected.' The work was duly completed and approved by the water engineer of the Local Authority (who supply the water). I also approved same, and in due course issued a final certificate.*

"*I have now heard from the client, who states that between May 30, 1928, and August 14, 1931, there have been no fewer than eleven occasions on which bursts have occurred, necessitating the attentions of a plumber. My client claims compensation from me on the grounds that the pipes fixed were too light for the pressure, and should not have been approved. Upon making inquiries, I find that the Local Authority have never had regulations governing the weights of pipes, but that ¾-in. to 11 lb. pipe is usually used in the district. I have weighed a length of the defective pipe and find it is ¾-in. to 9 lb. per yard.*

"*Before fixing this pipe (or at any time for that matter) the contractor never consulted me as to the weights I intended to be used, and I approved the work under the impression that the pipes were 11 lb. per yard. I should not have done so had I known they were only 9 lb. My client had the bursts repaired on each occasion by local plumbers (who did not execute the original work) and did not inform me of the trouble until after the last occasion.*

"*Would you please let me know your expert's opinion on my legal position in the matter. I am afraid I have no grounds for a claim against the contractor.*"

The liability of the architect depends upon the terms of the contract with his principal.

I am ignorant as to these terms, and therefore it is not possible for me to express a final opinion.

Generally, before an architect issues his certificate, he is under a duty to see that the builder has carried out his contract in a proper manner, and has used proper materials. The architect's principal has no technical knowledge, and it is for this reason (amongst others) that the architect is engaged.

Once it is established that the architect is under a duty to examine the materials, a breach of such duty gives rise to an action for damages, if, as a result of such breach of duty, damage arises. E. F. I.

Damage from Creeper

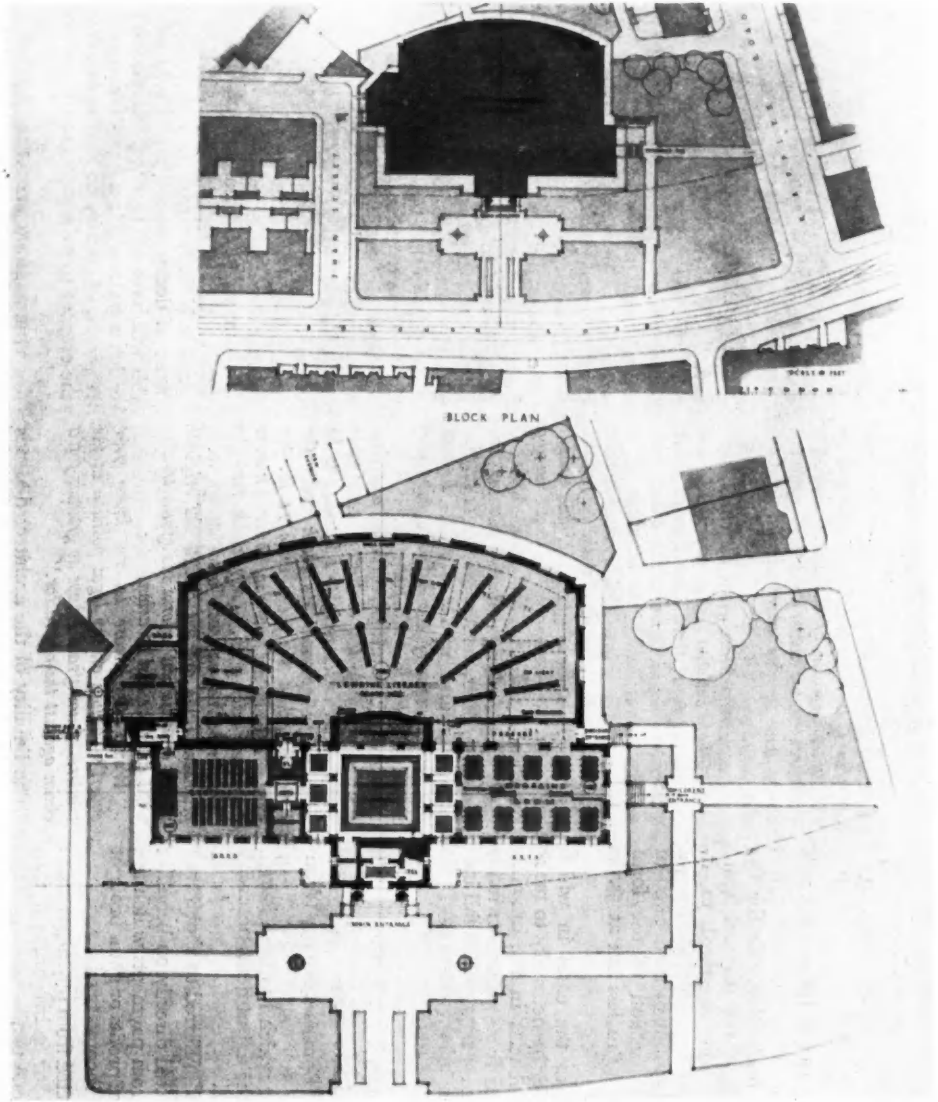
W. F. D. writes : "*I should be glad to know if your expert considers Virginia creeper, especially the small variety (Beechy) to be detrimental to the external stonework of a church. The small variety has nearly covered the south wall of the church. Does your expert advise immediate removal?*

We have not yet encountered an instance in which the growth of Virginia creeper on masonry could be considered to have had any significant deleterious action. Mr. A. R. Powys, however, states that he has seen damage caused by Virginia creeper of all kinds (see *The Repair of Ancient Buildings*, pp. 72 and 135).

It is likely that the present condition of the masonry of the building in question will determine whether the creeper ought to be removed.

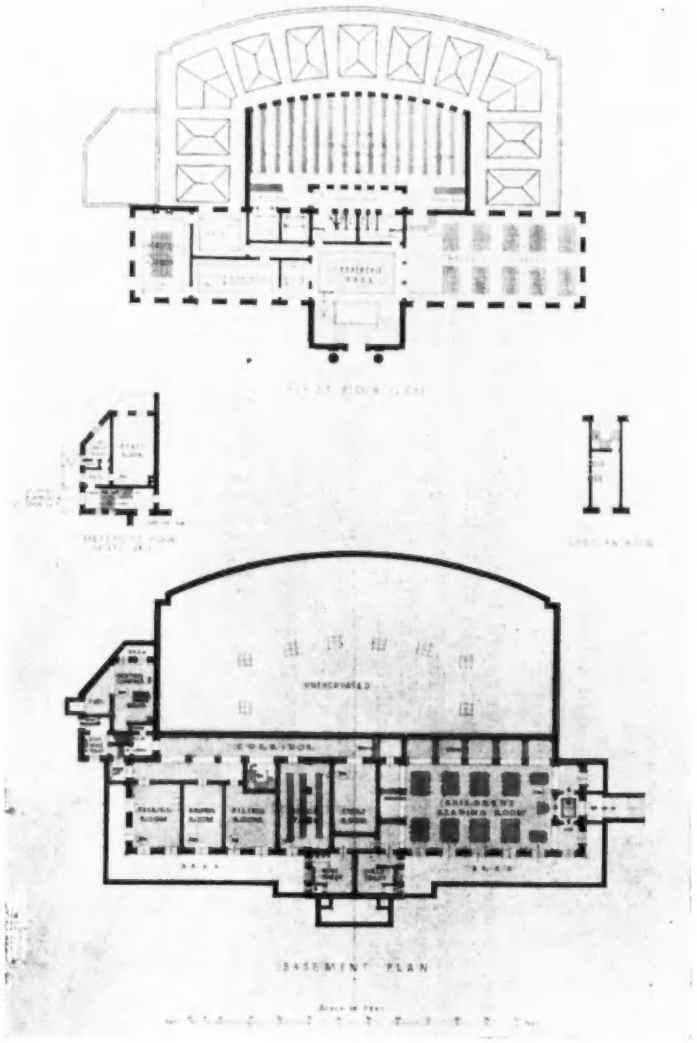
In our view, mechanical disruption due to the growth of the stems in crevices is likely to be the only serious cause of decay, and it is unlikely that this will have effect, except on surfaces which are already in a state of disrepair. It would, of course, be unwise to allow the creeper to gain access to the gutters and roof.

THE BUILDING RESEARCH STATION



Birkenhead Central Library Competition: Winning Design.]

Block and ground-floor plans. The lending library, which occupies the whole of the rear part of the building, provides accommodation for 65,000 volumes. On this floor also are the lecture and magazine rooms and the staff working office.



[*By Gray, Evans and Crossley.*

Basement, first and mezzanine (housing the staff working office) floor plans. The store-room, on the first floor immediately above the lending library, has a storage capacity for 50,000 volumes.

BIRKENHEAD CENTRAL LIBRARY COMPETITION

WINNING DESIGN: BY GRAY, EVANS AND CROSSLEY

MR. ANDREW N. PRENTICE, A.R.I.B.A., the assessor in the competition for the proposed Central Library, Birkenhead, has made his award as follows:

First premium (£250), Messrs. Gray, Evans and Crossley, of 51 North John Street, Liverpool.

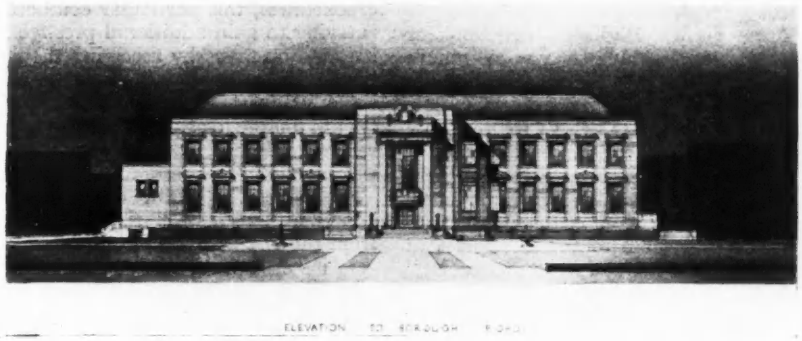
Second premium (£175), Messrs. Richard Owens and Son, of 3 Crosshall Street, Liverpool.

Third premium (£100), Messrs. Willink and Dod, of Cunard Building, Liverpool.

The competition was limited to architects who had been resident or had had an office within a twenty-miles radius of Birkenhead Town Hall, subsequent to January 1, 1930.

The Central Library, the approximate cost of which is about £40,000, is to form one of a group of buildings to be erected at an estimated sum of £200,000.

As will be seen from the block plan on the facing page, the main entrance to the library is situated in Borough Road, and those for the children and the staff in Raffles Road and Shaw Street, respectively. A subsidiary entrance has also been provided by a road connecting with Raffles Road.

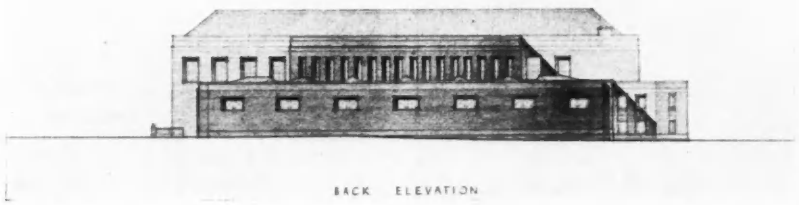


The principal elevation, facing Borough Road. The one-story projection on the extreme left, containing the staff entrance, is set back from the main building line.

The entrance hall, which gives direct access to the lending department, is flanked on the left by the lecture-room and the staircase and book lifts, and on the right by the magazine room. The working office for the staff, which is housed on the ground and mezzanine floors, overlooks Swan Street.

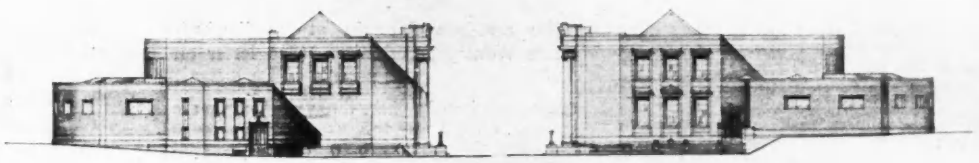
The basement floor accommodates the children's reading-room and the packing, filing and binding rooms. The ground immediately beneath the lending library has been left unexcavated.

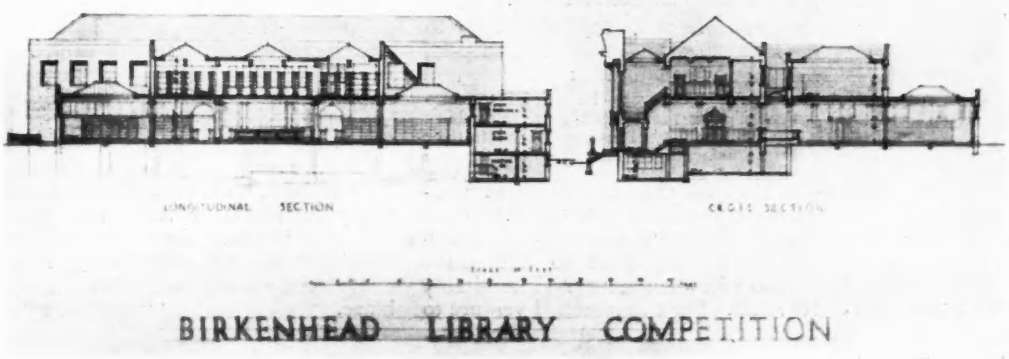
The first floor comprises a storeroom, with accommodation for 50,000 volumes, reference library, committee and librarian's rooms, etc.



The rear elevation. The horizontal windows in the shaded portion of the building light the lending library, and the vertical ones above, the store room

The architect's elevational drawings to Shaw Street (left) and Raffles Road (right). The ground beneath the one-story portion of the building, housing the lending library, has been left unexcavated.





Longitudinal and cross sections. As will be seen from the former, the staff quarters are planned on the ground and mezzanine floors, with the heating chamber immediately below, on the basement floor.

LETTERS FROM READERS

R.I.B.A. Premises Competition

SIR,—Your leading article for October 14, in which you comment upon a certain question asked of the assessors in the competition for new premises for the R.I.B.A., invites some melancholy reflections.

In the first instance, I cannot help feeling that when this particular competitor, in a moment of too candid self-revelation, hinted to the assessors that they should accept a "modernist" design, there was a golden opportunity for a rebuke. Surely, many of your readers will realize the profound discourtesy, not to say impudence, of the communication. Let me first comment upon the form in which the competitor's question to the assessors was couched

The first thing to note is that it can scarcely be considered a question at all, but is, in reality, nothing more nor less than a little discourse which the competitor has seen fit to submit to the attention of the assessors. For the benefit of your readers who have not seen the answers to questions in this competition, I may quote the third paragraph of the competitor's statement. After a reference to an alleged hint in the assessors' instructions to the effect that the proposed building should accord in some measure with its near neighbour, the B.B.C. Station, he says :

> On the other hand, if the promoters feel that a future generation may be unable to appreciate some of our recent buildings, acclaimed as masterpieces at the present time, and that the vogue for reproducing short lengths of American skyscrapers is but representative of a phase through which we are passing on our way to discovery of the appropriate architectural expressions in stone-faced steel structures too high to solicit traditional treatment and too low to admit of their successful handling as plain masses of masonry holed for windows, a hint to this effect is needed.

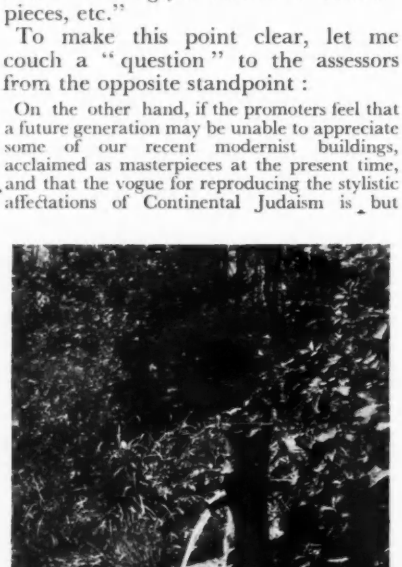
And then, in the last paragraph, he comes to the crux of the matter, and says :

> It would, moreover, be helpful to competitors if some pronouncement were made as to the advisability of incorporating into their designs ornamentations and features of the type known as "modernist," in view of the very conflicting opinions of eminent architects concerning the merits of these novel adornments.

This is not a very ingenuous document, for it must be obvious to the merest novice in the art of reading his native language, that in the first paragraph quoted the competitor is not seeking guidance or information from the assessors, but is in effect saying : "*I* feel that a future generation will be unable to appreciate, etc., etc." But, even in altering his phraseology to this extent, I have not truly indicated the full degree of dissimulation here expressed. In his intellectual crookedness, this particular competitor is trying to gain additional prestige for his own opinions by ascribing them to "a future generation." Had he been entirely honest, he would have written : "*I* am unable to appreciate some of our recent buildings, acclaimed as masterpieces, etc."

To make this point clear, let me couch a "question" to the assessors from the opposite standpoint :

> On the other hand, if the promoters feel that a future generation may be unable to appreciate some of our recent modernist buildings, acclaimed as masterpieces at the present time, and that the vogue for reproducing the stylistic affectations of Continental Judaism is but



The cast-iron fountain at Shellingford, near Wantage, Berkshire. (See letter on this page).

> representative of a phase through which we are passing on our way to discovery of a suitable architectural expression in stone-faced steel structures, and that the street formation renders inappropriate the crudities of style which result from depriving architecture of three-quarters of its intellectual content in obedience to the slogans "functionalism" and "fitness for purpose," a hint to this effect is needed.

Then, having read my little lecture to the assessors, with a suppressed snigger, I could have continued :

> It would, moreover, be helpful to competitors if some pronouncement were made as to the *in*advisability of incorporating into their designs ornamentations and features of the type known as "modernist," in view of the very conflicting opinions of eminent architects concerning the merits of these novel adornments.

Would it have been a d——d impertinence on my part to address the assessors in this manner? Indubitably it would. For this reason, I venture to express my regret that the other communication, equally impertinent, which was the subject of your leader for October 14, should have been included in the published statement of answers to questions issued by the assessors in the competition for new premises for the R.I.B.A.

A. TRYSTAN EDWARDS

Cast-Iron Pumps

SIR,—I remember some time ago being deeply interested in some illustrations you published of cast-iron pumps and such like. I enclose a photograph of a rustic fountain made of this material.

The fountain is situated in the village of Shellingford, near Wantage, in Berkshire. It supplies part of the water used in the village, and is fed from a spring, from which a feed pipe is taken up and carried through the cast-iron column.

A. SEEBE

Mitigation of Fire Risks

SIR,—I have not seen the *S.P.A.B. Annual Report* referred to by Astragal, under the heading "Mitigation of Fire Risks" in the JOURNAL for August 26, but I think that the *Report* should (if it does not) include a warning against the dangers of the modern "hearth fire" when introduced into old mansions without expert advice or supervision.

Personally, I have but little doubt that the modern "hearth fire" was in many cases responsible for the destruction of the old country mansions which went up in smoke with lamentable frequency some years back. Causes of fires are difficult and, in many cases, impossible to trace after the destruction of buildings, but one case of total destruction of a most interesting old house I can personally vouch for, as well as for the disgraceful fact that the owner relied upon the advice of an ex-Clerk of Works when altering the fireplace.

In Elizabethan and Georgian houses a certain formality of plan tended to bring floor-beams under fireplaces, the upper edges of beams over one floor coming within a few inches of the hearthstones of the floor above. The arrangement was safe enough while the *old* grates were in use, as the bars were some inches above the stone hearth, and any falling ashes grew cool without ill-effects. But local bricklayers light-heartedly installed the new "hearth fires" on the old hearthstones, and intense heat was communicated to the beams below, with the result that after many interrogatory sniffs and wondering comments about a "smell of burning" an unusually windy night fanned the smouldering beams into a blaze.

"CASUALTY"

LITERATURE

BUILDING HEIGHT, BULK AND FORM

THIS volume, the second of the Harvard City Planning Studies, embodies the results of the inquiries carried out by the late George B. Ford, in collaboration with Mr. A. B. Randall. The data collected has been digested and tabulated, and much of it finally crystallized in the form of graphs.

The book may be considered as a corollary to Hugh Ferris's *The Metropolis of Tomorrow*, for it brings the hard light of business finance to bear on the architect's dream city, and deals with the practical politics of civic planning, high buildings, and especially with the vital questions of light and air, land values and rentals, traffic congestion and the economic designs and useful life of skyscrapers. These chapters disclose some interesting facts. It has often been stated that above a certain number of stories the tall building in the United States does not, now that the zoning laws are in force, give an adequate return upon the cost of construction. The topmost floors, on account of the large percentage of floor area absorbed by lifts, stairs, lavatories, etc., could not, it was feared, be let at economic rents. But the question cannot be so simply dismissed, and many factors must be considered, the most important being the value of the site. In some cities the value is so great that no profit can be shown unless the block exceeds a certain number of stories, a condition which also obtains in London, though whether the site value produces the high building or the high building increases the site value is apparently an insoluble problem. The most satisfactory solution appears to be the building of isolated towers with wide spaces between, in place of the canyons of the earlier skyscrapers. The lower floors command less rent than the upper, which are quieter, better lit, and more healthy. Apartment blocks give, however, less return in rent for floors above the eighth, and sixteen stories is the limit of profitable height that can be built.

Many of the findings of the report confirm the theories of Corbusier, and the Frenchman's dream of the park city, dotted at wide intervals with tower dwellings, has been realized at Alden Park, Philadelphia, of which an aeroplane photograph has been included in the book. Is it better to spread upwards or outwards ? In the elimination of noise, escape from the carbon monoxide gas which is becoming a real danger to health in congested traffic jams, greater exposure to sunlight and to cleansing winds, the solution seems to lie in the tower. The electric elevator, as much as the motor car, has modified the conditions of modern life.

The book contains many diagrams, showing how the zoning laws affect the outline of office buildings and flats erected upon various types of sites. These, like the letterpress, deal exclusively with conditions in the United States, but the general conclusions of the report will be of value to all students of civic planning. LL.E.W.

Building Height, Bulk and Form. By George A. Ford, assisted by A. B. Randall and Leonard Cox. Cambridge : Harvard University Press. Price 15s. net.

THE NEW STYLE

DEHORTATIONS from the use of tradition have been the favourite topic of modern declaimers in all ages, and have been received with abundance of applause from the self-styled progressives and boos from what are generally termed the embittered apostles of conservatism. Today we have exchanged our close Victorian sitting-room, with its fussy, fabulous impedimenta, for the living-room of hygienic, disciplined severity.

In *The New Style* we are given 144 full-page plates in photogravure, all chosen, obviously with considerable care, to form a synthesis of the first phase of twentieth-century architecture and decorative design. They are intended to show what has been accomplished and from what it has been derived, with a representative survey of present-day achievement. Architects whose work is represented include Mendelsohn, Gropius, Dudok, Poelzig, Scharoun, Siclis, Mallet-Stevens, Oud, Corbusier, Neutra, Sir J. Burnet and Partners, and many others.

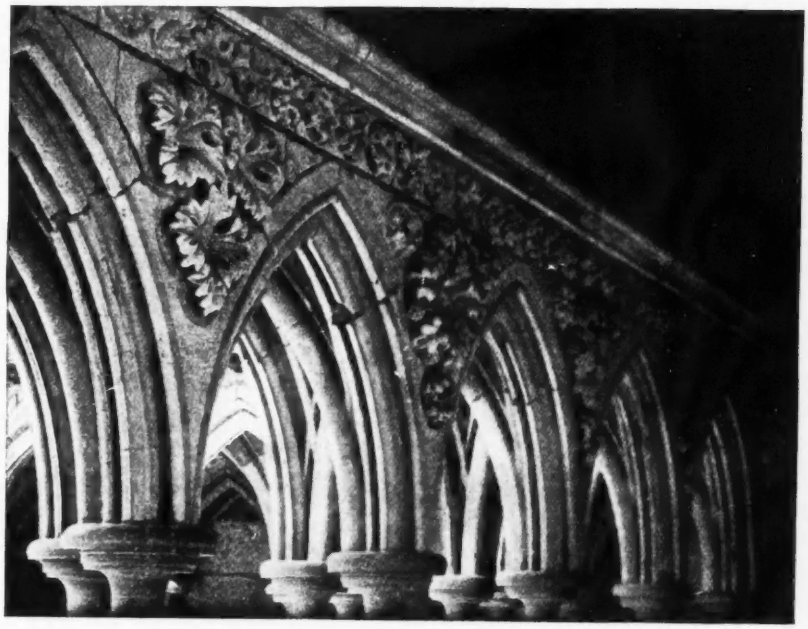
Generally speaking, one cannot help but agree that the battle is won and modern art now finds itself invested with certain security, even with a degree of respectability. But one must also agree that, as in every movement, there is an extremist " left wing " party who are causing some disquietude and who, observing neither time nor place, would e'en out with what came first to their restless pencils : crude, unlicked, incondite conceptions, which, like false saints, usurpers of true shrines, thrust out the legitimate occupants. But then could not as much be said against the " left wing " of the traditionalists !

E. R.

The New Style. Architecture and Decorative Design, with an introduction adapted from the French of Maurice Casteels. London : B. T. Batsford, Ltd. Price 25s. net.

ORNAMENTATION AND TEXTILE DESIGN

PROFESSOR BARKER is well known as an authority in connection with textile industries, and the primary appeal of his book on *Ornamentation and Textile Design* is to those directly interested in the production of designs to be carried out in woven materials. But much that he has to say may be applied in some degree to architecture, and to designing for various media in association with architecture. Indeed,



[*From* Ornamentation and Textile Design.

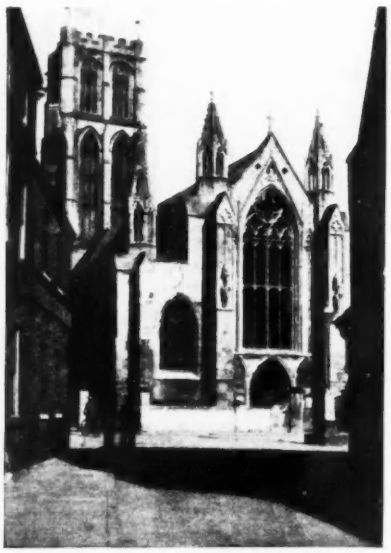
Stone carving in the cloister of the Church of Mont St. Michel.

there is still room for a more general realization than is common at present of the intimate relation that ought to exist between fabrics and buildings. Such matters, however, are not actually dealt with in this book, but are inevitably suggested by it.

In the course of seven short chapters design is discussed in relation to the "three fundamental activities of Life—the provision of Food, Shelter, and Clothing," to natural forms and the grotesque, to tradition, and to psychology. It is wholesome to be reminded that "in the best forms of design and ornamentation the material and the tool are not limitations to the designer, but veritably his means of self-expression," producing a character that would otherwise be lacking. For too often today the seeker after self-expression treats his materials like circus animals, training them to perform unnatural and unnecessary tricks.

The textile designer is strictly limited by his material, yet by this very fact he can make texture play a considerable part in design, as he varies the combination of his crossed threads. Therein, too, is a hint for the designer in any other medium, to avoid another common fault of the present day, the vague production of patterns without any evident applicability to any particular type of material, or purpose. The author stresses the fact that along with the material and the tool must be taken into account the psychological contribution to design, a contribution ranging from the age-old religious outlook of some ancient nation, to the individual interpretation of some fleeting present-day "fashion."

The ninety-five illustrations include many from the author's own camera, and range from such an exquisite "nature study" as the dew-decked cobweb to the artist's naturalism of a Charles Sims portrait; from the simple grace of a native boat of woven reeds to the complex cubism of French designs based on skyscrapers and steamers, or on an Olympian's view of an intricate folk-dance. V. M. C.



[*From* Ornamentation and Textile Design. An example of the geometrical type of Gothic architecture: the west end of Howden Church.

Ornamentation and Textile Design. By Aldred F. Barker, M.SC., F.T.I., Professor of Textile Industries in the University of Leeds. London: Methuen and Co. Price 15s. net.

DRAWING IN PEN AND INK

IN *How to Draw in Pen and Ink*, the author, Mr. Jasper Salwey, who is a well-known exponent of all forms of black and white art, gives a carefully-graduated course of instruction on pen and ink drawing, explaining what materials to use, how to begin and how to improve the technique once the elementary lessons have been mastered. The simplicity with which the explanations are given, together with the numerous diagrammatic drawings, should encourage many people who had hitherto thought this medium too difficult to learn. This, by the way, is the companion volume to *How to Draw in Lead Pencil*, published last year.

A feature of the book is a special chapter devoted to examples and descriptions of some of the work of prominent pen and ink draughtsmen, including Edmund New, Frederick L. Griggs, A.R.A., Frank Brangwyn, R.A., Donald Maxwell, Sir John Tenniel, Fred Pegram, R.I., Claude Shepperson, A.R.A., Herbert Railton, Claude Ferrier, and A. N. Prentice.

Regarding architectural perspectives, Mr. Salwey points out that "the preparation of perspectives for the architect's own use in judging the effect of his designs and for enabling his clients to visualize what the building will look like, is a sphere of work about which the every-day public knows little. The medium most favoured is water-colour; next perhaps wash; but when the drawings are required for reproduction in the press, pen and ink is generally considered most suitable." Taking as an example a perspective by A. N. Prentice, reproduced on this page, he further adds that "it is very typical of the kind of thing that is required. The building must be first set up in perspective by the recognized methods, and then carefully rendered. Accuracy in drawing and a confident crisp line are favoured. Attention must be paid to the intelligent delineation of detail. In addition to this, scenery and accessories must be introduced to give a sense of realism to the house and its setting. The work is exceedingly interesting and should appeal to the careful and conscientious penman. It offers a great opportunity for the development of an individual style." W. K.

How to Draw in Pen and Ink. By Jasper Salwey. London: John Lane The Bodley Head, Ltd. Price 5s. net.

[*From* How to Draw in Pen and Ink.

A Pen and Ink Sketch by A. N. Prentice.

Publications Received

A History of Architecture on the Comparative Method. By Sir Banister Fletcher, PP.R.I.B.A. London: B. T. Batsford, Ltd. Price £2 2s. net.

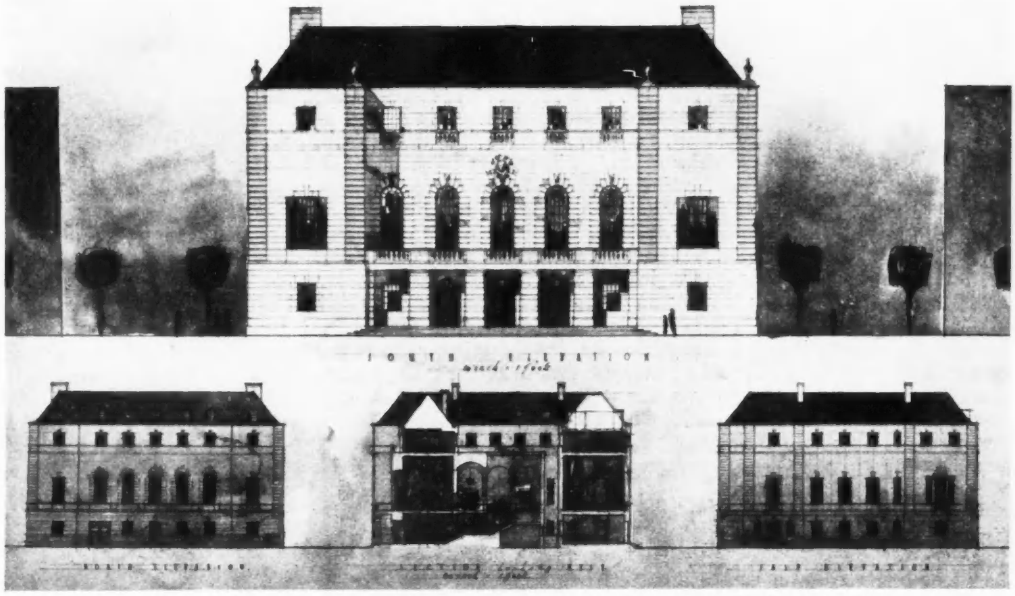
Modern Housing. By J. R. H. McDonald. London: J. Tiranti & Co. Price 25s. net.

Architectural Shades and Shadow. By E. G. Skelton. London: Library Press, Ltd. Price 18s. net.

Quantities. By Sir Banister Fletcher, PP.R.I.B.A. 10th edition. Revised by A. E. Baylis. London: B. T. Batsford, Ltd. Price 16s. net.

COMPETITION FOR A MANSION HOUSE

WINNING DESIGN: BY F. RUSSELL COX AND W. A. EDEN



The south (main), north and east elevation; and a section through the building, looking west.

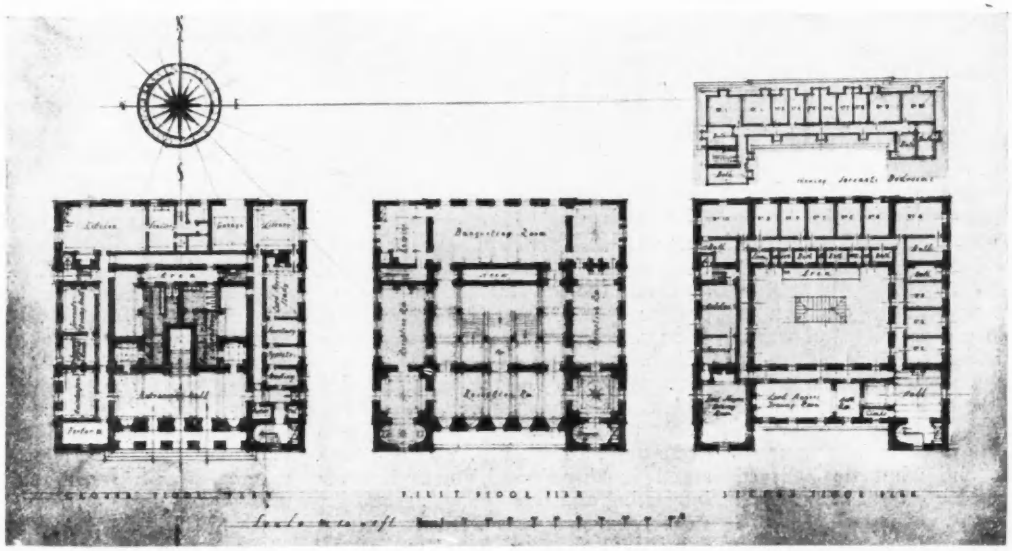
IN the competition for a design for a Lord Mayor's Mansion House, organized by the Birmingham Building Trades Exhibition, the Assessors, Messrs. A. T. Butler, F.R.I.B.A., H. B. Hobbiss, F.R.I.B.A., and J. B. Surman, F.R.I.B.A., have made their adjudication as follows:

First premium (£60), Messrs. F. Russell Cox and W. A. Eden, 3 Parton Street, London, W.C.1.

Second premium (£30), Messrs. Folkes and Folkes, 34 Hogley Road, Stourbridge.

Third premium (£20), Miss Marjorie M. Mocatta, Rosemead, School Lane, Bidston, Cheshire.

The designs submitted by the following architects were highly commended: Mr. Joseph Lea, of Timperley, Cheshire; Messrs. Batemans, of Birmingham; Mr. Charles Edward Pearson, of Lancaster; and Mr. J. Kenneth Hicks, of the A.A. School of Architecture, London.



Ground, first, and second floor plans, and plan showing the layout of the servants' bedrooms. The site is approximately 100 feet square. The main entrance hall, which is oblong in shape, is flanked by corridors running practically the whole depth of the building. The banqueting hall, on the first floor, overlooks the north front; on this floor also, are two reception rooms and a recreation room.

WHENCE INSPIRATION IS TO COME

MR. A. B. KNAPP-FISHER, F.R.I.B.A., in his presidential speech to the Architectural Association on Monday, said that since the War there had been in the world of architecture a desire to get rid of frills, of shams and shibboleths, to be frank in their work, to see beauty in honest expression of purpose, a striving to get back to first principles.

Assuming that those were perfectly right principles on which to work, let us, he said, proceed to dispose of some of the obstacles as he saw them, which hampered their attainment.

The eternal controversy of modern versus traditional, that was the first of them. Could not we reduce this stupid warfare to the level of Euclid's *Quod est absurdam?* The battle of the styles again? Not a bit of it. There was no such thing as modern architecture, any more than there was such a thing as morning coffee. There was the architecture of the moderns as they were to us—a very different thing, which, like so-called morning coffee, might be good or bad. Let us away then with this stupid label, which was so cramping and restrictive in its use.

What of tradition? That was a little different. Like the poor, it was always with us. The classics of architecture, of any art, were not there to be copied or avoided, they were a training ground for perceptions and faculties for which there was a use to be found on a much wider field—the past was, and must be, a living thing, not a fetter or a weight to original thought, but something to be naturally absorbed in a living present. We could not forget the models of the past. In the works of all great artists there were the foundations of tradition, but, like the modern surgeon, we should no more think of ignoring modern scientific discovery or scientific methods than he would think of performing an operation for appendicitis with an unsterilized clasp-knife.

In other words, while mindful of the past, a solution of present problems must be based on present facts, not on past history.

Architecture was not a question of giving way to compromise, but was a synchronization of essential factors—it depended on a proper marshalling of criteria, and the chief bugbear was the æsthetic side or element in connection with which let them remember what Voysey said, and what he believed was a profound truth, that materialism alone was a demon of unrighteousness. Architecture was an art, whatever the material needs or the economic means; we would be poor specimens if we consisted of matter only. So great were the foundations of our art that if it was to succeed as such, and to be lasting, the eternal verities must be made to mix with the applied actualities of the present day—to funk and shirk, "the grace in all simplicity," words attributed to Shakespeare in "The Phœnix and the Turtle," and to be content with the sort of building which shouted at you, "I may be stark but, thank God, I'm clean," was merely to produce an architecture of bones and skin, a skeleton of a thing, and was as bad as the building whose architectural chassis was covered with misapplied ornament, clogging its structure, like a Victorian matron with layers of thick petticoats and under bodices and other unmentionable clothing hanging round her. Let us be mindful of the past, and in this connection let us try to capture without the least shame or fear of being called a copy-cat, something of the mystery and colour of Eastern work, the light-hearted and magical touch of the baroque, the grace of the Greek, the poise of the mediæval, the air of the Renaissance and the grandeur of the Romanesque; only thus would we do great work; only thus should we get anywhere approaching in architecture what was to be found in eight out of ten slum children in any city—poise, balance, vitality and beauty of form—an architecture which was a synthesis of function and spirit, which presented us with beauty, and gave us inspiration.

Did we, he asked, remember our *Wisdom of the Ancients*—Lucre, the temptress, watching the gambler (in building in this case) opening her Pandora's box and letting loose on town and country alike a rain of architectural calamities? But if we remembered, there was Hope at the bottom of the box, and therein lay the great incentive for us. The outlook was not hopeless, but the architect of today and tomorrow must tackle this question of his field o action if he was not to be irrevocably destroyed.

DECORATING THE HOUSE

MR. EDWARD MAUFE, F.R.I.B.A., in the course of his address on "Furnishing and Decorating the House," given at the Architectural Association on Saturday last, said the records of the past all showed man reaching out to something new—that was the traditional attitude, and all the great architecture of the past was born from that endeavour. To employ past styles now was to be a revivalist, not a traditionalist, and revivals, if they had nothing of us and our time in them, were born dead; were fakes. Art had always expressed contemporary life.

He did not say discard the past—man's desires had been very much the same throughout the ages. We must learn from it, but we must not copy it. We must be sensitive to the past, but also sensitive to our new conditions. We must use our new materials—concrete, glass, steel, new woods, veneers, etc., and also our new discoveries in heating and lighting, and all the inventions to give us greater speed; these last, if we used them wisely, would give us greater leisure.

It was the lag of the English mind which had prevented our artists from being used fully. In furnishing and decorating, for instance, we were constantly looking abroad, and saying how interesting and new the work was, yet the foreign designers were the first to admit that they had been inspired by our architects, by such men as Morris, Macintosh and Voysey.

Much of the modern work of Sweden, which had rightly been so generously praised, had been directly influenced by such men as Soane and Norman Shaw. It was quite unfair to our painters, sculptors and architects to copy the past and not employ them, and much more was it unfair to ourselves—they would enrich the Nation if we let them. But if we did not give them work, they could not develop, and so we held them back and let others profit by what little they could do on their own. A nation got the architects it deserved. It was a question of demand and supply.

Man had proceeded largely by revolt, and we must realize this when considering the decoration and furnishing of our own time. Contrast with the past was desirable, but it must not be merely a revolt from the times of our grandfathers—we must not merely swing with the pendulum of fashion. We should let our furnishing and decoration be a natural outcome of our own conditions.

Mr. Maufe said he was not one of those who considered ornament taboo. "Fitness for purpose" was an excellent slogan for a beginning, but "fitness for purpose" was not enough—it was a Puritan creed, and too easy to be fundamental and for all time. We could be simple and dignified in our scheme, and be right, but we could also be the opposite of these and still be right if our human values were right—if we had proportion and contrast. One of the essentials was contrast, and a nice relation of the various parts—we needed incident and adventure, but also background.

THE SPECIFICATION WRITER

Practical Methods of Waterproofing Basements

BY THEODORE CRANE

THE term waterproofing, as used in this article, applies to treatments designed to resist actual water pressure resulting from hydrostatic head in contradistinction to damp-proofing. Although the design of the structural work, upon which a satisfactory waterproofing job largely depends, is an engineering matter, it is necessary for the architect to have a thorough knowledge of the various waterproofing systems in order that he may be aware of their advantages and limitations and be able to choose correctly when it is necessary for him to decide upon the means to be used on any particular job.

The subject of waterproofing masonry walls below ground, particularly those composed of concrete and subject to more or less water pressure, has received a great deal of attention during recent years. The problems presented by building foundations, often extending 50 ft. or more below ground-water level, have introduced conditions never before encountered in the industry, with the result that the attention of engineers has been directed to a study of waterproofing methods and a search for the most economical solution to meet any given set of conditions.

Until about twenty-five years ago it was the general practice to use the "membrane method," employing layers of felt, jute or cotton drill, with a pitch or asphalt binder, under practically all conditions where it was necessary to resist a hydrostatic head. Various other systems of waterproofing in the nature of surface applications were used principally for damp-proofing purposes; these varied from bituminous applications employed on the earth side of retaining walls to the old soap and alum method known as the Sylvester process. Prior to this time integral admixtures were used only to a limited extent for waterproofing purposes, and the possibilities of mortar applications effectively to resist hydrostatic pressures had not yet been developed.

At the present time the problem is not so much the question of making the basement dry as the choice between the various means of accomplishing this end. So many excellent systems are at present available—several of which will often serve satisfactorily to meet the requirements of any specific problem—that it is necessary to study the construction details of the work and the proposed method of handling the excavation and substructure in order to determine the most economical type of waterproofing.

Broadly speaking, for the problems encountered in building construction, the various methods of waterproofing may be classed under four main divisions: integral, surface coatings, mastic, and membrane. We might, of course, mention as a fifth method the careful grading of aggregates and proportionment of the concrete ingredients to obtain waterproofed concrete without the aid of admixtures or surface applications. But such can hardly be considered a method of waterproofing and should be a part of the normal procedure on any well-organized operation.

The function of an integral waterproofing material is to make the concrete itself impermeable. Whether in a liquid, paste, or powdered form, such admixtures may be designed either to increase the workability of the plastic concrete, thereby making the mass more dense, or to add certain other desirable characteristics which will lessen the probability of water passing through the finished surface.

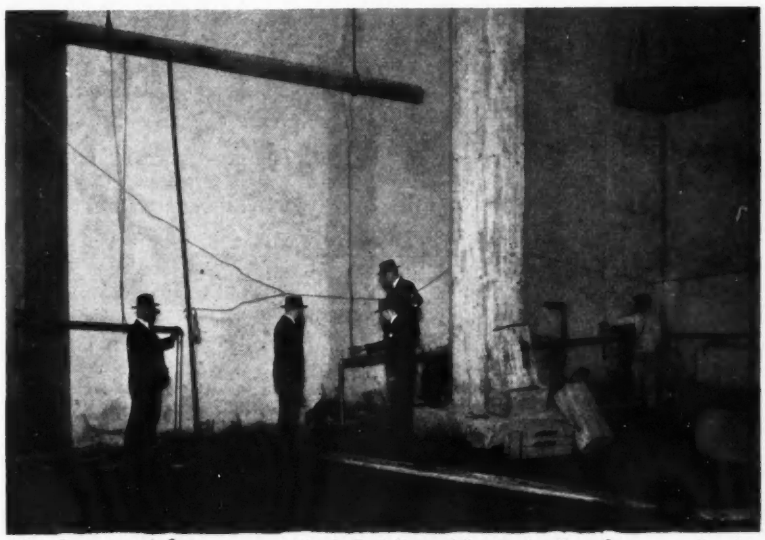
SURFACE COATINGS

Under surface coatings, we find the following methods differentiated by the material or materials used for surfacing: the mortar-coat used with or without integral waterproofing compounds; penetration surface treatments, either inert or reacting chemically with the cement; liquid or plastic bituminous coatings, used as either trowel, brush or spray applications; non-bituminous coatings, the function of which is to form a film upon the finished surface.

Of these various methods, most of which are suitable for damp-proofing purposes and have been employed extensively above ground, the mortar-coat system has probably been the most widely and successfully used to withstand hydrostatic pressure. This method has many advantages, chief among which is economy, because of the simplicity of its application and the ease with which it can be adapted to the foundation conditions on the average job. A cement surface has not, of course, the elasticity of a membrane, and should not be used where there is danger of settlement or cracks due to vibration. The system has a wide application and is equally satisfactory when applied to the inside surfaces of exterior basement walls of small residences, as on the sub-basements of office buildings where the concrete caissons forming the exterior walls often extend 60 to 90 ft. below ground water. The mixture ordinarily used is composed of one part of cement to two parts by volume of well-graded sand, with the addition of a waterproofing compound in such proportions as are recommended by the manufacturers. Two coats, giving a total thickness of $\frac{5}{8}$ in., are applied to walls; floors are also finished in two coats but with a total thickness of 1 in.

The mortar-coat method, when properly applied, is capable of resisting very heavy water pressures, provided the structural work beneath has adequate strength. Although some experts prefer thoroughly to eliminate, by means of bleeding pipes, any percolation of water through surfaces to be treated, others apply their waterproofed cement mortar to walls through which water is actually seeping.

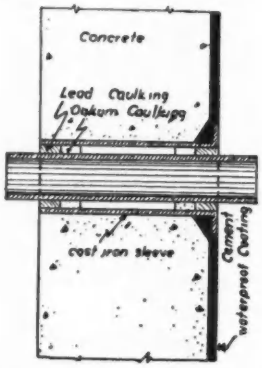
When waterproofing floors, the coating



The basement of the new Aldred Building, Montreal, Canada, treated with waterproofed cement, under inspection. D 2

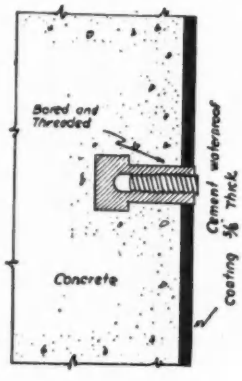
is placed upon the upper surface of the structural slab and serves the purpose of both waterproofing and wearing finish. Such floor coatings are often laid monolithic with the base. When joining new work to that previously placed, in cases where the latter has already set hard, the edges of the previously applied finish should be straight cut before continuing the work. It is also essential that a continuous seal be obtained where the waterproofing is placed in contact with structural steel. All paint should be removed and the surface thoroughly cleaned in order to provide a bond between the steel and waterproof coating.

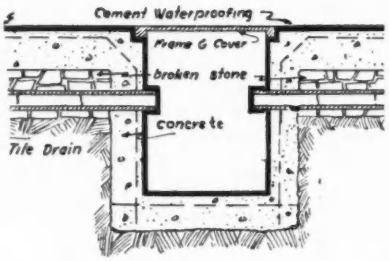
Particular attention should be given to the detailed design of waterproofing beneath boilers and machines. The foundations should be designed to form a depressed pit; heat insulation should be placed on top of the waterproofing beneath boilers and furnaces, and cork insulation or other means employed to lessen vibration beneath machines.



Sleeves designed as shown in the illustration should be used around steam pipes, the waterproofing bonded to the sleeve, and the space between the pipe and sleeve caulked as shown. Steel or cast-iron pipes not subjected to temperature variation may be bonded directly to the waterproofing.

The type of sump ordinarily used to relieve hydrostatic pressure under floors during the progress of the work comprises a steel pipe from 6 to 8 ins. in diameter, perforated at the lower end and furnished with a threaded cap which is screwed in place after the waterproofing work is completed. Sumps may also be constructed of concrete, as shown in the illustration, tile drains being led in from adjacent parts of the basement. In this case the





ends of the drains are formed by lengths of iron pipe which are also fitted with threaded caps. By the use of such sumps the expense of pumping is reduced, and the drains from any particular part of the basement may be closed when the operation is finished.

As it is not practicable to resist high hydrostatic heads by the dead weight of the concrete forming the floor slab of the basement, permanent sumps are often constructed in order to relieve water pressure throughout the life of the building. In other cases, where the uplift due to the water pressure does not exceed the load that can be economically carried by a structural slab, the basement floor may be designed as an inverted flat-slab held in place by the column loads. If the head is much over 10 ft., however, a drainage system and open sump is usually the most economical.

The first step in the procedure of applying a waterproof coat of this nature is to roughen the concrete surface in order to provide a bond. On brick or stone walls joints should be raked out to a depth of $\frac{3}{8}$ in., and all surfaces should be brushed clean in order to remove dust or loose particles. A coat of neat cement grout of a consistency of heavy paint is applied with a brush after the masonry surfaces have been thoroughly saturated with water. When wetting the walls it should be understood that the object is to use enough water so that the moisture will not be drawn out of the applied mortar coating and still leave the surfaces in a condition to exert a certain amount of suction, which will be destroyed if they are drenched to the extent that moisture is running down the surface.

The two coats of mortar are applied as outlined above and properly cured under moist conditions. The problem in work of this kind is not so much that of preventing leakage through the waterproofed surfaces as that of properly handling the construction joints, angles between floors and walls, column bases and pipe lines.

Among the various surface applications which are used for both damp-proofing and waterproofing are those of a bituminous nature largely made up of asphalts. Such are usually applied from the ground line to a point somewhat below the underside of the basement floor, with a reinforcing cove at the junction of the footing and wall on the exterior surface of the wall and across the top of the footing. The trowel applications are usually about $\frac{1}{8}$ in. thick, and follow a priming coat which is applied by fine air spray or hand brush. Such treatments have a very important use for damp-proofing purposes, but it is recommended that some other form of waterproofing be used where actual water-pressure exists.

THE MASTIC METHOD

The mastic method of waterproofing basements consists of facing the surface to be waterproofed with a layer of brick or terra-cotta tile, laid in a bituminous material. It is customary to lay the brick with a shove joint so that the mastic completely surrounds each unit. The outside course is then thoroughly mopped, and may be cleaned to receive a protective coating. This method is not widely used at the present time, but may occasionally be a desirable choice for basement work in very limited space where there is no ground water but some protection is needed against the possible breakage of a city water main.

[*To be concluded*]

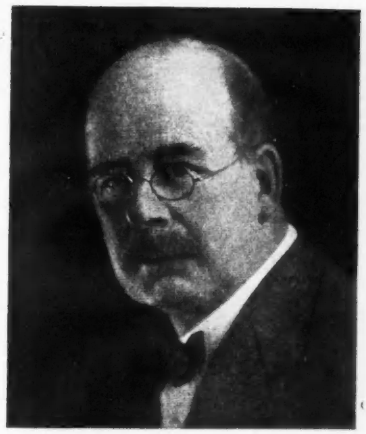
The foregoing article is reprinted from *The Contract Record and Engineering Review*, Toronto, Canada.

THE Copper and Brass Extended Uses Council records a failure of water pipes under somewhat unusual conditions. A large institution put in a service of both hot and cold water pipes in copper about 1910. The installation was happy in that it had no history until quite recently, when the water supply was chlorinated and treated with alumina-ferric. Soon after, corrosion began to occur in the horizontal lengths of the hot water pipes. The trouble was eventually traced to rust from the iron tanks, settling on the bottom of the horizontal pipes where the flow was slowest, and there, with the help of the treated water, setting up electrolytic corrosion with the copper.

The cause was over-alumination of the water, which resulted in an increase of acidity. It has been recommended that the water should be treated with soda-ash in addition to alumina or by substituting sodium aluminate for the alumina. Since other water authorities may have or contemplate this class of treatment for their water supply, it is well to point out that some sort of failure in the water services would then be probable, irrespective of the particular metal that had been used for the pipes.

SOCIETIES AND INSTITUTIONS

Mr. G. L. Pepler.



Mr. E. Guy Dawber.

At the fourth national conference of the C.P.R.E., held at Bath, both Mr. Pepler and Mr. Dawber contributed papers on "The Country Town and its Setting," reports of which are given on this page.

C.P.R.E. NATIONAL CONFERENCE

THE fourth national conference of the C.P.R.E. was held in the Guildhall, Bath, from October 15 to 17 last. The conference was devoted to a series of addresses on the preservation of the countryside, etc.

On October 15, after the reception of the delegates by the Mayor and Mayoress of Bath, in the Pump Room, Mr. Mowbray Green, F.R.I.B.A., delivered an illustrated address on "Eighteenth-Century Bath."

On October 16, the morning session was devoted to the consideration of "The Country Town and Its Rural Setting." Mr. G. L. Pepler, after quoting figures giving the possible increase in the population of a certain town he was familiar with, said the figures quoted appeared to indicate that not a great deal more land would be required for building round most country towns, and that it would be possible to prepare plans which allowed to each town a reasonable margin for new building and beyond that preserve the countryside as countryside. This was not meant to suggest that no building should be allowed in the countryside. No one suggested that a dead hand should be laid upon it. What did seem desirable was that sprawling mongrel growth should be avoided, that there should be two clearly distinguishable types of development—the urban and the rural—each fitted to the needs and suited to the style of town and country respectively. The whole problem was one for each town or group of towns to consider carefully, in collaboration with their rural neighbours and with the county council, and having come to a conclusion, to prepare a plan to give effect to it.

Mr. Guy Dawber, P.P.R.I.B.A., said the interest of our provincial towns consisted in their quiet beauty and simplicity, and in the old houses and buildings of varying dates and style. He did not suggest for a moment that our country towns, the older ones especially, should be regarded as museum pieces, and that no changes or additions should be made to them, for that would be mere folly; but what should and could be done was to see that, by these changes and adaptations to suit modern needs, we did not lose the character of the towns, and in so doing make them all alike in their dull uniformity. No one wished to keep everything as it was centuries ago, and in building only to perpetuate the old styles; but it was a grievous pity to introduce new buildings, or alterations to existing ones; which quarrelled with their neighbours and bore no relation to the spirit of the place. After all, it was in its architecture, the setting of its old buildings, its beautiful trees, its open spaces and streets, that the charm of our country towns so largely consisted.

The afternoon session on October 16 was devoted to "Traffic and Amenities." Mr. G. H. Jack, F.R.I.B.A., in the course of his address, said the adoption of the Home Office bylaws regulating the construction and layout of petrol stations should be compulsory. He had found that the mere fact of bylaws being in force had had a most salutary effect. The improvement was very marked. Unnecessary advertisements were fast disappearing and the garish pumps were now painted a subdued green in common with the other apparatus, and the station itself was of iron. There should, however, be some control over the number of stations. Two or more in one village street were clearly undesirable. The veto on such materials as corrugated iron, etc., was a great help when stations were suggested in or near beauty spots. Unfortunately, the restriction did not apply to garages. Their placing and appearance could only be dealt with under the town-planning Acts. The specifying of suitable building materials did not appear to have created any great hardship. He wished it could be applied generally to country cottages and agricultural buildings.

Other papers were read by Messrs. W. Dallimore and E. H. Fryer on "The Use of Trees on the Sides of Public Roads," and "Roadside Signs," respectively.

"National Parks" was the subject of the session held on October 17. Among the speakers were Dr. I. T. Gibbon, C.B., Sir Lawrence Chubb, Professor R. S. T. Chorley, M.A., and Mr. G. F. Herbert, M.A.

THE NATIONAL CRISIS

Mr. John Watson, F.R.I.B.A., presiding at a meeting of the Royal Incorporation of Architects in Scotland, held at Edinburgh, referred to the national crisis. It was, he said, satisfactory to know that money spent on housing schemes, and also various subsidies, were to be diminished or abolished, and they were only sorry the decision had not been reached long ere this. The incursion of the State into house building had brought into being a number of anomalies which would have been avoided had the provision of houses been left to private enterprise. When they returned to normal conditions, they should press on local authorities and see to it that they only dealt with slum areas, and they should do so with all their energy. Surely it was most important that they should do all they could to at least arouse public opinion against the tremendous sums that were being spent on housing, which he could not see had been all needed in the past. If an economic rent had been demanded for the houses, then the demand for them would not have been so great.

A source of dissatisfaction to the profession, and a danger to architecture in general, was the growing tendency of all public authorities to do their own architectural work. He knew that it was a good thing to have a good official at the head of each department run by an authority, but how often did they see that the official had to hand over his work to the staff, and be they ever so good and well trained, he

considered the system was not the proper one.

The following new members were elected :

Fellow : Mr. R. R. Mill, Edinburgh. Associates : Messrs. J. A. Donaldson, A. S. Fitzgerald, Hugh Hawson, jun., L. H. Hill, and P. E. M'Manus, jun. Students : Messrs. K. D. Miller, G. D. Hart, R. A. Macfarlane, A. D. Stewart, H. J. D. Home, W. A. Jack, N. V. Low, R. A. Webber, A. R. Whitelaw, Wm. P. Mitchell, John Bolton, L. A. M. Fraser, Robert Neil, Thos. Hall, A. A. MacFarlane, and Miss M. F. Muirhead.

THE ARCHITECT AND THE COMMUNITY

Dr. Raymond Unwin, P.R.I.B.A., speaking on "The Architect and his place in the Community," at a meeting of the Bristol Society of Architects, said specialization had certain advantages and dangers, and the only way in which specialization could take place without harm was by co-operation between different specialists. Much more co-operation was needed between the architect and the engineer, and the architect and the builder.

They were passing from an age of haphazard into an age of planning, and had been struggling through a period of civilization in which, no doubt for a very good purpose, their attention had been concentrated largely on mass or quantity.

He believed they were seeing a period of transition and emergence from a materialistic civilization, based on the power to produce quantity. They needed a period of less quantity and more quality.

They had, he thought, a right to point out to modernists that experiments in bill-posting were entirely justified, but experiments in building had to be undertaken with a sense of responsibility.

Mr. W. J. Stenner, F.R.I.B.A. (President), presided.

MR. T. C. HOWITT ON ECONOMY

At a meeting of the Nottingham, Derby and Lincoln Architectural Society, Mr. T. Cecil Howitt, F.R.I.B.A., in the course of his presidential address, said the general cry of economy throughout the country was bound to have a serious effect on the building trade if all prospective schemes were at once cancelled. The majority of building projects under discussion at the moment were of a very practical and constructive nature, with very few luxury buildings. He understood that at the present time there were approximately 1,900 men in the building trade unemployed in Nottingham and Derby, and unless normal building activities were proceeded with, this number was likely to reach a most appalling figure. It was therefore obviously sound to proceed with as many useful building schemes as possible.

Referring to the design of buildings, he said that if a building suited its particular situation, blended happily with its surroundings, expressed its purpose, and was obviously soundly built, then one had satisfied the greatest points in good architecture. He was afraid, however, those points were very little appreciated by the general public, or otherwise we should be saved from the many atrocities which were perpetuated in building materials up and down the country. In a nation such as ours it was difficult to imagine why there was not some general control with regard to the design of buildings. The local authority had its own powers to control traffic, the medical officer could deal with items affecting the health of the city, the whole of the sanitary services to the city were controlled, but, unfortunately, there was nothing to stop the epidemic of

Mr. T. Cecil Howitt, F.R.I.B.A., whose presidential address to the Nottingham, Derby, and Lincoln Architectural Society is reported on this page.

ill-designed buildings springing up amidst some beautiful English scenery, together with many vulgar advertisements.

Many local authorities had now adopted what was commonly known as the Bath Clause, but, unfortunately, this was of very little use, and in practically all cases it had proved quite ineffective where it had been adopted for some little time. In the Clause, the question of taking any action was provided for far too late in any building project. What was really required was some simple and constructive information on a development scheme both as regards general skylines and materials to be used, before any part of a particular area was developed. Unfortunately, such instruction was generally confused with the fact that elaborate designs and types of detail must be gone into for the whole scheme, rather than the broad issue of the general effect of the style and the general heights of the buildings, and the treatment of culminating points to vistas that required special features. In almost every town where street-widening operations had recently been carried out, this very simple procedure had not been taken advantage of.

R.I.B.A. ELECTION OF MEMBERS

At a recent meeting of the R.I.B.A. the following members were elected :

As Licentiates (35)

Adams, P. W.	Hawkins, J.
Askey, H. E.	Holbeche, W. T.
Bater, A. H.	Houston, T.
Blyth, R.	Ledgard, W. A.
Booth, A.	Nicol, B. R.
Bragg, G. J.	Pickup, J.
Campbell, G. C.	Potter, A. R.
Candish, H. S.	Richardson, A. H.
Davis, H. S.	Rowlinson, M.
Dotchin, F. E.	Sayers, A. D.
Fairer, T. J.	Scott, J. L. A.
Funnell, S. J.	Sharp, A. J.
Garbutt, H. C.	Stanham, Lt.-Col. H. G.
Garland, G. G.	Treacher, G. H.
Gough, W. T.	Urquhart, R. B.
Halsted, A.	Van Langenberg, T. C.
Hand, E. F.	Yendall, M.
Hardington, H. B.	

THE R.I.B.A. DIPLOMA IN TOWN PLANNING

The examination for the R.I.B.A. Diploma in Town Planning, which will be conducted by the Joint Town Planning Examinations Board, will take place in July, 1932. Candidates must make application to sit before March 1, 1932. The examination is open only to Fellows, Associates and Licentiates of the R.I.B.A.

Forms of application may be obtained, free, on application to the Secretary, R.I.B.A., 9 Conduit Street, W.1.

TOWN AND REGIONAL PLANNING

The annual country meeting of the Town Planning Institute was held at Bristol on October 9 to 11. The Lord Mayor gave a civic welcome at the opening, held at the Council House.

Professor Patrick Abercrombie, F.R.I.B.A., speaking on the Bristol and Bath Regional Planning Scheme, said that the modern growth of Bristol made it truly representative of industrial conditions affecting inward remodelling and outward growth. All the problems of the impact of the town upon the country were there seen typically.

Was, he asked, Bath England's most beautiful architectural city? That was a question for debate, but there could not be more than three other serious claimants.

The fullest compactness and completeness of town planning, he continued, could only be achieved where the guiding authority was also the developing agency. He declared that development of a wrong sort was going on.

Mr. Lessel S. McKenzie, in an address, dealt in detail with the town planning in and around Bristol.

Mr. G. L. Pepler, proposing a vote of thanks to the speakers, said their evidence of the town and regional planning activities in and around Bristol and Bath was particularly encouraging at the present time, when economy was a national necessity. The remarkable assets might be frittered away unless the situation was carefully surveyed.

ADVICE TO YOUNG ARCHITECTS

Mr. J. B. Surman, F.R.I.B.A., in his presidential address to the Birmingham Architectural Association, offered some advice to younger members of the architectural profession. It was, he said, not always easy to hold the weight of authority between the wealthy client and the small builder. Often, he was afraid, the architect's eye had been on the next job when a settlement time came, and he had given a final certificate with his eye on that future job. This would not do, for their responsibility was clear.

Architects must remember they were guardians of their clients for the time being, and must act wisely. There was a service required of all—their voluntary service to their city and country. Were they satisfied with their city—its amenities? Were they satisfied with the countryside, with the hideous structures which covered the landscape, with the illuminated signs and with all the trappings of modern civilization which we often mistakenly called improvements?

In all these matters they had a definite responsibility, and it was their duty to point out what was right and fit, and to endeavour to develop the sense of what was beautiful and fitting.

EARLY RENAISSANCE ARCHITECTURE

Sir Banister Fletcher, PP.R.I.B.A., lecturing at the L.C.C. Central School of Arts and Crafts on October 14, dealt with the Early Renaissance Architecture of Florence.

He gave an interesting comparative analysis of the characteristic features of the style, and described and illustrated, by means of lantern slides, the churches and palaces of Brunelleschi, Alberti, and their early followers, and showed how symmetry of classic origin was combined with variety and picturesqueness in detail.

Sir Banister, on Wednesday last, described the Early Renaissance buildings of Northern Italy, particularly those of Pavia, Milan and neighbouring centres.

UNIVERSITY OF LONDON ATELIER

The commencement of the thirteenth session of the University of London Architectural Atelier was marked by the opening of a new building by Professor A. E. Richardson, F.S.A., F.R.I.B.A., on Wednesday, October 7. A general meeting of members was held after Professor Richardson's inaugural address, at which the following were elected to serve on the committee:

Monitor and chairman, Mr. W. M. Goode-Smith; senior representative, Mr. W. Rowley Hall; second-year representative, Mr. M. R. Packer; first-year representative, Mr. A. G. Wise.

The original home of the atelier in Malet Street, Bloomsbury, has now been absorbed in the scheme for the new centre of the University of London.

COMPETITIONS OPEN

October 31.—Sending-in day. Proposed Tuberculosis Hospital, Sully, near Cardiff, for the Welsh National Memorial Hospital. Assessors: C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175 and £100. Conditions were obtainable from F. J. Alban, Memorial Hospital, Cardiff. (Deposit £2 2s.)

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions, etc., obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions, etc., obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, OCTOBER 28

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Palaces and Villas of Rome." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, OCTOBER 29

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "The Roman Empire." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, OCTOBER 30

ILLUMINATING ENGINEERING SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Discussion on "Some Impressions of the I.I.C. Floodlighting." By Percy Good. **6.30 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "The Growth of Rome." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, OCTOBER 31

Sunrise, 6.49 a.m. Sunset, 4.38 p.m.

R.I.B.A., 9 Conduit Street, W.1. Last of four non-technical lectures. "The Uses of An Architect." By H. B. Creswell, F.R.I.B.A. Chairman: Charles Marriott, HON. A.R.I.B.A. **3 p.m.**

MONDAY, NOVEMBER 2

R.I.B.A., 9 Conduit Street, W.1. Inaugural Meeting: President's address. **9 p.m.**

TUESDAY, NOVEMBER 3

KING'S COLLEGE, Strand, W.C.2. Fourth of nine public lectures on Gothic Art. "Symbolism and Iconography." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Westminster, S.W.1. Presidential Address. **3.30 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Gt. George Street, S.W.1. Opening Meeting. Address by Sir Cyril R. S. Kirkpatrick. **6 p.m.**

WEDNESDAY, NOVEMBER 4

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "St. Peter's Cathedral and the Vatican, Rome." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, NOVEMBER 5

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A.

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "Further Excavations on Macedonian Sites." By W. A. Heurtley. Also "Recent Discoveries at Vinca by Dr. M. Vassito." By Professor J. L. Myers, F.S.A. **8 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Metalwork as a Method of Enriching Furniture." By Seymour Lindsey. **7.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Eastern Chapels in the Cathedral Church of Norwich." By the Very Rev. the Dean of Norwich, F.S.A. **8 p.m.**

FRIDAY, NOVEMBER 6

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "The Roman Empire." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, NOVEMBER 7

Sunrise, 7.1 a.m. Sunset, 4.26 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Third of five non-technical lectures on Present-day Architecture. "Designing the Garden." By G. A. Jellicoe, A.R.I.B.A. **3 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to W. W. Howard & Co.'s Wharf, Canning Town. **2.45 p.m.**

TUESDAY, NOVEMBER 10

KING'S COLLEGE, Strand, W.C.2. Fifth of nine public lectures on Gothic Art. "Sculpture: 1140–1250." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Notes on Ventilation." By T. C. Noble, B.A. 7 p.m. Manchester and District Branch. At the Engineers' Club, Albert Street, Manchester. "A Summary of Modern Heating Systems." By W. P. Ollett. 7 p.m. **7 p.m.**

ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "The L.C.C. Drainage Bye-laws." By Lt.-Col. W. Butler, M.B. **6 p.m.**

WEDNESDAY, NOVEMBER 11

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Palaces and Churches of Venice." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Planning and Lettering of Public Notices and Signs." By George Mansell. Chairman: The Mayor of Westminster. **8 p.m.**

THURSDAY, NOVEMBER 12

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Ancient Coffers and Cupboards." By Fred Roe, R.I. **7.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Hardwoods." By Alexander Howard. **7.30 p.m.**

GARDEN DESIGN

[BY OUR SPECIAL LAW REPORTER]

THE designers of many beautiful gardens throughout the country undoubtedly look upon them as both artistic and architectural works of art, and are not anxious that they should be reproduced. But few are aware that their designs are protected under the Copyright Act, though such is the fact.

Recently, Lord Justice Romer, in the Chancery Division of the High Court of Justice, had before him an action which raised the point whether a garden drawn and specially designed was entitled to the protection of the Act, and could not be reproduced by a firm who contracted to lay out a garden. The point had never been raised in the Courts before, and, although his Lordship characterized the action as a ridiculous one, he added that, like most ridiculous actions, it raised a considerable point of law.

The garden consisted of walls, terraces, a pond and round steps—in fact, an artistic design and an architectural work of art—which, it was claimed, was protected by the Copyright Act. What the designer complained of, was that a firm of builders had published a photograph of his garden in a catalogue, and claimed it as their particular design and construction, and offered to reproduce it. Under the circumstances, the designer sought the protection of Court and asked for an injunction to restrain infringement of his copyright of the design of his garden, which, he said, was an architectural work of art—defined in the Act as a subject-matter of copyright.

It was admitted that the garden had features which were common to all gardens, but Lord Justice Romer, after hearing the evidence of experts, and seeing photographs, said it contained a combination of features which were novel, and which had not been seen before. To publish a photograph of a garden was not an infringement of designers' copyright.

His Lordship expressed the opinion that the garden was a structure, as it had steps and walls, and it was impossible to say it did not possess artistic character or design. Therefore, it came within the Act, and it was an infringement of copyright to offer to construct a garden in accordance with the particular design.

The issue raised by the action was an important one, and the ruling of the Court now becomes the law, and designers of gardens, who produce structures of artistic and architectural merit, can rest assured that, though their gardens may be envied, they cannot be copied.

(The action was by H. Vincent and Sons, landscape gardeners, of Northwood, Middlesex, against Universal Housing Co., Ltd., of Rickmansworth, reported in a recent issue of the JOURNAL.)

TRADE NOTES

We have received from Messrs. Rowe Bros., of Liverpool and Bush House, London, a pamphlet describing the Sloan royal flush valve. This valve is manufactured in Canada and the United States, and is sold in this country by Messrs. Rowe Bros. Comparatively few people are aware that it is possible for a water closet to be flushed in a satisfactory manner, without the use of a flushing cistern. The principal disadvantage of the flushing cistern is the time required for it to fill up again. The noise involved in the process of filling up is also a strong objection. The Sloan royal valve has now been in existence for twenty-five years, and, during that time, the principle of its operation has remained unaltered.

This interesting valve is divided into two chambers by means of a rubber diaphragm. The chambers are connected through a narrow by-pass which penetrates this diaphragm. The slightest touch of the handle grip, which may be pulled in any direction, releases the pressure in the upper chamber, as a result of which the entire working parts are raised, allowing free passage to the water. As the water passes through, the by-pass gradually admits a small stream into the upper chamber, which is filled at the correct moment, and so interrupts the flow.

It is interesting to observe that the valve may be used for water delivered at any pressure whatsoever, without being specially regulated to suit the pressure. This is due to the fact that the proportion of water passing through the by-pass is in a fixed ratio to the water that goes through the valve. "If," says Messrs. Rowe's booklet, "the pressure is 20 lb. and the quantity that goes down through the valve does so in 10 seconds, the quantity that fills the upper chamber will go through the by-pass in 10 seconds. It follows, therefore, that if the pressure goes to 50 lb. the quantity that goes down through the valve will travel much faster, but the by-pass being subject to exactly the same pressure, the upper chamber will fill up relatively as fast, so that the quantity of water will always remain the same."

*

A girder 68 ft. long, 10 ft. 4 ins. deep, and 2 ft. 4 ins. wide, weighing 98 tons, has just been constructed by Messrs. Dorman Long & Co., Ltd., Middlesbrough, for the Cumberland Palace Hotel, Marble Arch, London. This girder was transported in one piece by train from Middlesbrough. It will be used at the first-floor level of the hotel to act as one of the main supports of the building over the Winter Garden, and carrying nine floors above. The enormity of this piece of steel can be gauged by the fact that the rivets used in its construction alone weigh 2½ tons.

We are desired by Art Pavements and Decorations, Ltd., to express their regret that, through an oversight, the names of Messrs. W. Aumonier and Sons were omitted in their advertisement in THE ARCHITECTS' JOURNAL for October 14. Messrs. Aumonier were responsible for the carving of the marble cap illustrated, which is one of the caps and columns being supplied by Art Pavements and Decorations, Ltd., for the new Cunard Building in Leadenhall Street.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Swimming Bath, Hostel for Bourne and Hollingsworth (pages 554-557, and supplement). General contractors, Higgs and Hill, Ltd. Sub-contractors : G. N. Haden and Sons, Ltd., heating and ventilation; The Turn-Over Filter Co., Ltd., filtration plant; Carter & Co. (London), Ltd., tiling; James Powell and Sons (Whitefriars), Ltd., glass tiles for swimming bath ; Birmingham Guild, Ltd., Staybrite balcony and electric light fittings; Dorman Long & Co., Ltd., constructional steelwork; Diespeker & Co., Ltd., reinforced concrete floors and roofs; Barlow Bros., electric lighting; Zeiss Ikon, Ltd., reflectors; Henry Hope and Sons, Ltd., casements and skylights; Haskins, Ltd., stainless steel doors; John Bolding and Sons, Ltd., sanitary fittings; Venesta, Ltd., bathing box partitions; John P. White and Sons, Ltd., flush doors; Yannedis & Co., door furniture; F. H. Ayres, Ltd., diving board equipment; Arthur Lyon & Co., electric clocks.

Logie Central School, Dundee (pages 558-560). Contractors : John Carnegie and Sons, Ltd., excavation, foundations, dampcourses, asphalt, concrete blocks, reinforced concrete, bricks, stone, artificial stone and terra-cotta; Charles Brand, demolition and slates; Fleming Bros., structural steel; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, fireproof construction; John Youden and Son, Ltd., wall tiles and tiling; North of England School Furnishing Co., sliding partitions; Lindsay and Scott, glass; Heywood, Ltd., patent glazing; T. P. Fimister, central heating, grates and plumbing; Westwood and Son, electric wiring, electric light fixtures and bells; David Dickie and Son, door furniture; Helliwell & Co., Ltd., casements; George Stephen and Son, folding gates; A. McRitchie, plaster; Gratrix and Sons, metalwork; Charles Ogilvy, joinery; John Scott and Son, furniture; Dykes Bros., clocks.

ANNOUNCEMENT

Mr. Frank J. Potter, F.R.I.B.A., architect and surveyor, has entered into partnership with Messrs. Felix and Humphrey Goldsmith. The name of the firm will be Messrs. Frank Potter and F. and H. Goldsmith, of 1 Verulam Buildings, Grays Inn, W.C.1. (Telephone No. Chancery 7525).

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BERMONDSEY B.C. has prepared a scheme for the provision of a municipal centre in the Silver Street area, comprising a laundry section, library, public hall and clinic, at a cost of £47,500.

The BERMONDSEY B.C. has approved plans for the erection of flats on the Silver Street area, at a cost of £11,875: and flats on the Fort Street site, at a cost of £28,000.

The BERMONDSEY B.C. has approved a revised scheme for the erection of twenty-two flats and five shops on the Rotherhithe Street area, at a cost of £14,800.

Plans passed by the FULHAM B.C.: Jam factory, Rannock Road, for Messrs. J. Lyons & Co., Ltd.: alterations and additions, "Cock" public-house, North End Road, for Mr. N. Parr: offices, workshops, etc., Lillie Road Underground Railway, for Mr. V. A. M. Robertson.

The ISLINGTON B.C. has prepared a scheme for extending the Caledonian Road baths and installing filtration plant, at a cost of £9,290.

The L.C.C. has sold two sites on the St. Helier estate, MORDEN, to the Church of England authorities, for the erection of churches.

The L.C.C. has passed plans, submitted by Messrs. Edmond Coignet, Ltd., for the erection of premises on the site of 67–9 Whitfield Street, and 8–9 Chitty Street, ST. PANCRAS.

Messrs. Maple & Co., Ltd., are to carry out alterations to their premises in TOTTENHAM COURT ROAD, W.C.1, at a cost of £125,000.

The WATFORD Corporation has passed a layout plan for the development of land at Leavesden by the Watford Gardens Estate, Ltd.

The WATFORD Corporation has obtained five acres of land at Leavesden for a housing scheme.

Plans passed by the WATFORD Corporation: Alterations, 89 High Street, for Rego Clothiers, Ltd.; post office, Market Street, for Postmaster-General; houses, Swiss Avenue, for Mr. John Goss; house, Kelmscott Close, for Mr. W. T. Simmons; two houses, Rickmansworth Road, for Mr. Gregg Cooper; alterations and additions, Harwoods Road, for West Watford Conservative Club; additions, Northbank House, Clarendon Road, for Trade Unionist and Labour Club.

Plans passed by the WOODFORD U.D.C.: Four houses, Parkfield Road: six houses, Fairlawn Drive; five houses, St. Barnabas Road: two houses, Mayfair Gardens.

SOUTHERN COUNTIES

Plans passed by the DARTFORD U.D.C.: eighteen houses, Brent estate, for Mr. W. F. Summers; two houses, Shepherds Lane, for Mr. R. B. Smith; twelve houses, Ingram Road, for Mr. G. W. Chancellor; house, York Road, for Mr. W. R. Mackney; ten houses, Brent Lane, for Mr. J. Ellard.

Plans passed by the GRAVESEND Corporation: Workshops and garages, Bentley Street, for Mr. E. W. Filkins; two houses, Dennis Road, for Messrs. R. Hopkins and Sons; alterations, "Brewery Tap" public-house, Love Lane, for Mr. R. Bennett; two houses, Fairway, for Mr. H. L. Smith.

H.M. Office of Works is considering a site in Anglesea Road, PORTSMOUTH, for the erection of a labour exchange.

The PORTSMOUTH Corporation is negotiating for land at Copnor for the erection of a stores and transport depot.

Plans passed by the PORTSMOUTH Corporation: Twelve houses and one studio, Carshalton Avenue, Cosham, for Mr. E. W. Payne; seventy-one houses, Westwood Road, for Mr. R. J. Winnicott; alterations for Acme Printing Co., Ltd., 186 Queen Street, for Messrs. King and Milne; business premises, 60 London Road, for Messrs. E. Plooard & Co., Ltd.; six houses, Merrivale Road, for Mr. J. J. Canterbury; two houses, Essex Road, for Messrs. J. E. Jones and Son; twelve houses, Pitreavie Road, Cosham, for Messrs. G. and W. Mitchell; shop and showrooms, 117-119 Commercial Road, for Landport Drapery Bazaar, Ltd.; store, Claremont and Walmer Roads, for Mr. C. Welton; three houses, Copnor Road, for Mr. A. J. Chase; four houses, Kirby Road, for Mr. W. W. E. Ekers; nine houses, Tangier estate, for Mr. G. Coleman.

SOUTH-WESTERN COUNTIES

The Paignton and District Land and Development Co., Ltd., is to develop an estate and construct a new road near Maidenway Road, PAIGNTON.

The PAIGNTON U.D.C. is having plans prepared for a smaller type of house, for erection on the Collaston estate.

Mr. E. H. Ladbury is to develop the Woodland Park estate, PAIGNTON.

Plans passed by the PAIGNTON U.D.C.: Houses, Colley End Road, for Mr. A. Maunder; seven bungalows, Barnfield Road, for Messrs. Wallis and Underhay; four houses, Colley End Road, for Messrs. L. and L. W. Payne; eight houses, Marldon Road, for Mr. W. H. Toms; extensions to lecture hall, Torquay Road, for Baptist trustees; three flats and six shops, Winner Street, for Mr. W. J. R. James; four houses, Allhallows Road, for Mr. H. Proctor; two bungalows, Maidenway Road, for Mr. A. W. Humpherson; sixteen houses, Lammas Lane, for Capt. J. E. Eastley.

The TORQUAY Corporation is in negotiation for the acquisition of land at Barton for the erection of thirty-two houses.

MIDLAND COUNTIES

The BIRMINGHAM Corporation has sold land at Weeford to the Post Office, for the erection of a telephone exchange.

The CHESTERFIELD Corporation is to submit the plans of the proposed new baths to the Ministry of Health for approval.

The CHESTERFIELD Corporation is to sell land in New Beetwell Street to H.M. Office of Works for the erection of a postal stores and garage.

The CHESTERFIELD Corporation is to negotiate for land at New Whittington for a housing scheme.

Plans passed by the CHESTERFIELD Corporation: Alterations and additions, printing works, Wheeldon Lane, for Messrs. Brayshaw and Bateman; additions, "Rising Sun" public-house, London Street, Whittington, for Scarsdale Brewery Co., Ltd.; two bungalows, Langer Lane, for Messrs. F. Irvine & Co.: store, Boythorpe Road, for Chesterfield Co-op. Society, Ltd.: two houses, Kawkesley Avenue, for Mr. W. Bargh: two houses, Newland Gardens, for Messrs. J. Collis and Sons, Ltd.; alterations, "Spread Eagle" public-house, Beetwell Street, for Chesterfield Brewery Co., Ltd.; servants' hall, Whittington House, Old Whittington, for Mr. E. D. Swanwick; two bungalows, Walgrave Road, for Mr. R. Plowright; extensions, Edmund Street school and St. Helen's school, for Education Committee; alterations, Messrs. White and Son's premises, High Street, for Messrs. Duncan Gilmour & Co., Ltd.

The Board of Education has sanctioned the plans of the CHESTERFIELD Education Committee for the reconstruction of the St. Helens and Cavendish schools.

The CHESTERFIELD Corporation has obtained sanction for a loan of £13,560 for the erection of forty houses in Dickinson Road and Walton Crescent.

The Central Electricity Board is to erect a sub-station in Ferry Hinksey Road, OXFORD.

The OXFORD Corporation is to prepare a clearance scheme for an area at St. Aldates.

Plans passed by the OXFORD Corporation: Three houses, Godstow Road, Wolvercote, for Mr. G. W. Robinson; three houses, Oxford Road, Cowley, for Miss J. A. Knott; showroom, St. John's Road, for Messrs. Stephenson (Oxford), Ltd.

Mr. A. E. G. Jones has submitted plans to the SEDGLEY U.D.C. for the erection of a cinema in Redhall Road.

Plans passed by the SEDGLEY U.D.C.: House, Robert Street, for Mr. Hickman: two houses, Wolverhampton Road, for Mr. I. Cole; house, Wolverhampton Road, for Mr. A. Jones; two bungalows, Moden Hill, for Mr. G. Sheldon.

Plans passed by the SMETHWICK Corporation: Four houses, Pitcairn Road, for Mr. J. Reece; extensions, Credenda works, Bridge Street, for Messrs. J. A. Phillips & Co., Ltd.: shops, Norman Road, for Mr. J. Reece; alterations, 42-44 Waterloo Road, for Messrs. J.W. Dugmore, Ltd.; alterations at the old Wesleyan Chapel, New Street, for Messrs. S. J. Tyler and Sons, Ltd.; parish hall, Cambridge Road, for St. Stephen's trustees; house, Pitcairn Road, for Mr. J. Barker.

The SOLIHULL R.D.C. is to erect thirty-two houses in Damson Lane from the plans prepared by Mr. W. T. Orton.

The STOURBRIDGE Corporation is to erect 186 houses on the Forge Hill estate.

The WALSALL Corporation has prepared a more economical scheme for the erection of a tuberculosis block at the Goscote Hospital, at a cost of £14,600.

The WALSALL Education Committee is to proceed with extensions at Whitehall school, at a cost of £4,400.

NORTHERN COUNTIES

Messrs. T. P. Smith, Ltd., are negotiating for land in Moss Bank Park, BOLTON, for the erection of dwelling-houses.

The BOLTON Corporation has approved proposals for dealing with the Barlow Row and Green Street improvement areas.

The BOLTON Corporation is to erect 477 houses on the Hall-in-Wood estate.

The BOLTON Corporation is negotiating for land in Lum Street for the erection of wash-houses.

The BRADFORD Corporation has approved amended proposals of Mr. J. Atkinson Jowett for the erection of 722 houses in Rhodesway and Allerton Road, and shops in Thornton Road.

Plans passed by the ROTHERHAM Corporation: Two houses, Old Wortley Road, for Mr. E. Atton; shop and house, Masbro' Street, and two cottages, Tummon Street, for Mr. O. Tummon; house, Old Wortley Road, for Mr. Grimolby; extensions, St. James's Social Club, Lister Street, for the Club Committee.

The SOUTHPORT Corporation is to erect 116 houses on the Guildford Road estate.

Plans passed by the SOUTH SHIELDS Corporation: Bakery extension, Palmerston Street, for Mr. William Howell; flats, Meldon Terrace, for Mr. Howard Hill; two bungalows, St. Peter's Avenue, Harton, for Messrs. T. A. Page and Son.

Plans passed by the STRETFORD U.D.C.: Six houses, Marston Road, for Mr. Herbert Grinshaw; two houses, Urmston Lane, for Mr. D. Franklyn; sub-station, Kings Road, for the Electricity Board.

Canon Leteux is acquiring land in Dewsbury Road, WAKEFIELD, for the erection of a junior school.

Plans passed by the WAKEFIELD Corporation: House, Eden Avenue, for Mr. W. H. Ogden; four houses, Flamshaw Lane, for Mr. Percy Frith; house, Calder Street, for Mr. H. Stewart; shop and house, Northgate, for Messrs. G. Blakey and Son, Ltd.

MISCELLANEOUS

The GLASGOW Corporation is to erect 230 houses on the Netherton housing estate.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	•1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A1	Atherstone	Mid. Counties	1 5	1 0½
B1	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2•
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0½
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A2	Bewdley ..	Mid. Counties	1 5½	1 1½
B2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	•1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0½
A2	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B2	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B2	Brixham ..	S.W. Counties	1 3	11½
A2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A2	Crewe ..	N.W. Counties	1 5½	1 1½
A2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11½
A2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11½
A2	Driffield ..	Yorkshire	1 5	1 0½
A2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	•1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0½
A2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1½
A1	Goole ..	Yorkshire	1 5½	1 1½
A2	Gosport ..	S. Counties	1 5	1 0½
A2	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	•1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11½
A2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0½
B2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1½
A2	Kidderminster	Mid. Counties	1 5½	1 1½
B2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11½
A2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	•1 8½	1 3½
A2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1½
B2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A1	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0½
A2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	•1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	•1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	•1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1½
A2	Skipton ..	Yorkshire	1 5½	1 1½
A2	Slough ..	S. Counties	1 5	1 0½
A2	Solihull ..	Mid. Counties	1 5½	1 1½
A2	South'pton	S. Counties	1 5	1 0½
A2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1½
A2	Wellingborough	Mid. Counties	1 5½	1 1½
A2	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1½
A2	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . . per Y.C.	8 9
2″ Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2″ Broken Brick . . . . ,,	9 6
¾″ ,, ,, ... ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4″ s. d.	6″ s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾″ Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, *Add* . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2″ Breeze Partition Blocks . . per Y.S.	1 9
2½″ ,, ,, ,, . . ,,	2 0
3″ ,, ,, ,, . . ,,	2 3
4″ ,, ,, ,, . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R at Nine Elms:	
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2″ . . . F.S.	1 8
,, ,, 3″ . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24″ × 12″ Duchesses . . per M.	31 0 0
22″ × 12″ Marchionesses . . ,,	28 0 0
20″ × 10″ Countesses . . ,,	20 5 0
18″ × 10″ Viscountesses . . ,,	17 0 0
18″ × 9″ Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20″ × 10″ medium grey per 1,000 (actual)	26 0 0
,, ,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . . as 1″ F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ⅜″ . . . . Sq.	1 1 0
,, ½″ . . . . ,,	1 3 6
,, 1″ . . . . ,,	1 5 6
,, 1¼″ . . . . ,,	1 11 0
,, 1½″ . . . . ,,	1 15 0
Deal matchings, ⅜″ . . . ,,	16 0
,, ½″ . . . ,,	17 6
,, 1″ . . . ,,	1 6 0
Rough boarding, ⅜″ . . . ,,	18 0
,, 1″ . . . ,,	1 0 0
,, 1½″ . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness .	⅛″	¼″	⅜″	½″
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch . .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder . .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1 6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1 0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼″	½″	1″	1¼″	2″
Tubes, 2′–14′ long, per ft. run	4	5½	9¼	1 1	1/10
Pieces, 12″–23¼″ long, each	10	1/1	1 11	2 8	4 9
,, 3″–11½″ long ,,	7	9	1 3	1 8	3/–
Long screws, 12″–23¼″long,,	11	1/3	2 2	2 10	5 3
,, ,, 3″–11½″long ,,	8	10	1 5	1 11	3 6
Bends . . . . ,,	8	11	1 7½	2 7½	5 2
Springs not socketed ,,	5	7	1 1½	1 11½	3/11
Socket unions . . ,,	2/–	3/–	5 6	6 9	10/–
Elbows, square . . ,,	10	1/1	1 6	2 2	4 3
Tees . . . . ,,	1/–	1/3	1/10	2 6	5 1
Crosses . . . . ,,	2/2	2/9	4 1	5 6	10 6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1 4	1 9	2 9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58¼	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . . 57½	Galvanized gas .	47½
Water . . . 52½	,, water .	42½
Steam . . . 47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜″ . . ,,	10 0
,, ,, ½″ . . ,,	9 9
,, ,, ⅝″ . . ,,	9 6
,, ,, ¾″ . . ,,	9 0
,, ,, ⅞″ . . ,,	9 0
,, ,, 1″ . . ,,	9 0
,, ,, 1¼″ . . ,,	9 0
,, ,, 1½″ . . ,,	9 0

Cast-iron rain-water pipes of	3″ s. d.	4″ s. d.
ordinary thickness metal . F.R.	7	10
Shoes . . . . . each	2 3	3 3
Anti-splash shoes . . . ,,	5 0	8 6
Boots . . . . . ,,	3 3	4 6
Bends . . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . . ,,	4 0	5 0
Swan-necks up to 9″ offsets. . ,,	4 0	6 3
Plinth bends, 4½″ to 6″ . . ,,	4 0	5 6

Half-round rain-water gutters of	5″	6″
ordinary thickness metal . F.R.	5	6
Stop ends . . . . . each	6	7
Angles . . . . . ,,	1 7	1 11
Obtuse angles . . . . ,,	2 0	2 6
Outlets . . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	20 0
,, drawn pipes . . . ,,	20 6
,, soil pipe . . . . ,,	23 6
,, scrap . . . . ,,	10 0
Solder, plumbers' . . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . . ,,	1 0
,, tubes . . . . ,,	1 4

L.C.C. soil and waste pipes:	3″	4″	6″
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . . lb.	6
Laths, sawn . . . . bundle	2 4
,, rent . . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼″ Polished plate, n/e 1 . ,,	1 0	to 1 3
,, ,, 2 . ,,	1 2	,, 1 7
,, ,, 3 . ,,	1 7	,, 2 5
,, ,, 4 . ,,	2 1	,, 2 11
,, ,, 6 . ,,	2 3	,, 3 2
,, ,, 8 . ,,	2 6	,, 3 6
,, ,, 12 . ,,	2 9	,, 3 8
,, ,, 20 . ,,	3 0	,, 3 11
,, ,, 45 . ,,	3 3	,, 4 1
,, ,, 65 . ,,	3 7	,, 4 6
,, ,, 90 . ,,	3 10	,, 4 0
,, ,, 100 . ,,	4 0	,, 5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,, over 15 . ,,		7 6
Putty, linseed oil . . lb		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add "	3 0
If in underpinning	" "	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
4" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
½" do.	"	3 4 0
⅝" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1½" pulley stiles, 1½" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	"	1 19 0
Do. in covering to turrets, etc.	"	2 6 0
Do. in soakers	"	1 12 0
Labour to welted edge	F.R.	1½
Open copper nailing	"	3½
Close "	"	4½

Lead service pipe and fixing with pipe hooks	½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
	F.R. 1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	—	—	—	—	—	5 9
Extra, only to bends	Each —	—	—	—	2 3	6 6
Do. to stop ends	" 7	9	1 0	1 3	2 0	—
Boiler screws and unions	" 3 6	4 0	5 6	8 0	—	—
Lead traps	" —	—	—	7 6	10 6	—
Screw down bib valves	" 7 6	10 6	12 6	—	—	—
Do. stop cocks	" 10 0	12 0	16 0	23 6	56 6	—
4" cast-iron ½-rd. gutter and fixing					F.R.	1 3
Extra, only stop ends					Each	1 0
Do. angles					"	1 6
Do. outlets					"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on					F.R.	1 6
Extra, only for shoes					Each	2 6
Do. for plain heads					"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " " "	"	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	" 1 0
Arctic glass and glazing with putty	" 1 2
Cathedral glass and do.	" 1 3
Glazing only, British polished plate	" 8
Extra, only if in beads	" 2
Washleather	F.R. 4

PAINTER

	s. d.
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	" 1 0
Do. with washable distemper	" 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	" 3 3
Do. on woodwork	" 3 6
Do. on steelwork	" 3 0
Do. and brush grain and twice varnish	" 5 6
Stain and twice varnish woodwork	" 1 11
Stain and wax-polish woodwork	" 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 6
Hanging ordinary paper	from " 3 9

SWIMMING BATH IN A HOSTEL

DETAILS OF AN ADDITION IN AN EXISTING BASEMENT

[*Slater and Moberly, Architects.*

THE SWIMMING BATH, LOOKING TOWARDS THE SHALLOW END

ELSEWHERE in this issue an illustrated description is given of the swimming bath ingeniously constructed within the existing hostel for employees of Messrs. Bourne and Hollingsworth, in Gower Street, London. The photograph above and the architects' drawings overleaf supply some interesting practical details in amplification.

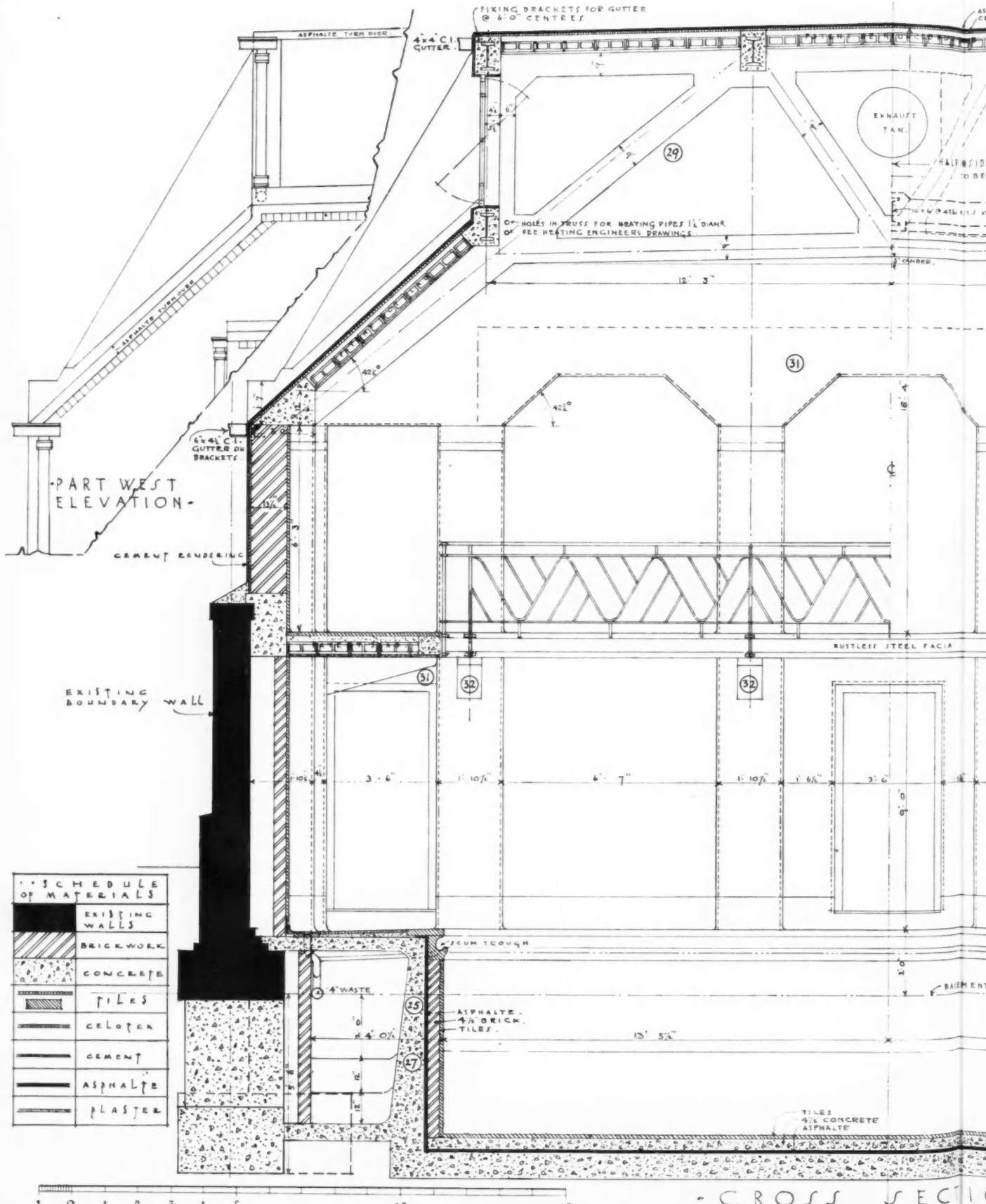
The problem presented to the designers was by nature many-sided. Selecting at random a constructional point and an æsthetic one, attention may be drawn to the precautions taken against condensation, and to the decorative scheme and its corollary, lighting.

A plenum plant, discharging under the balcony, and extract fans in the roof, promote the removal of damp-laden air, while panel heating is introduced under the balcony soffits as well as low-pressure hot-water heating under the windows. Moreover, walls and roof slopes are insulated with one-inch wall-boards.

The colour-scheme is generally of blue and buff. The pool itself is lined with vivid blue tiles; stainless steel is used for the balcony and metal fittings; the bathing boxes are of ebonized mahogany. The sources of light are indirect, and include powerful submerged flood-lights.

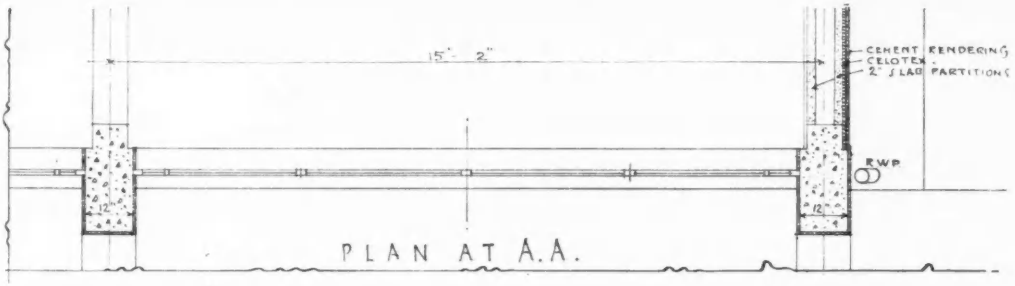
- WARWICKSHIRE - HOUSE - GOWER - STREET -
- PROPOSED - SWIMMING - BATH -
- CROSS SECTION - ETC -

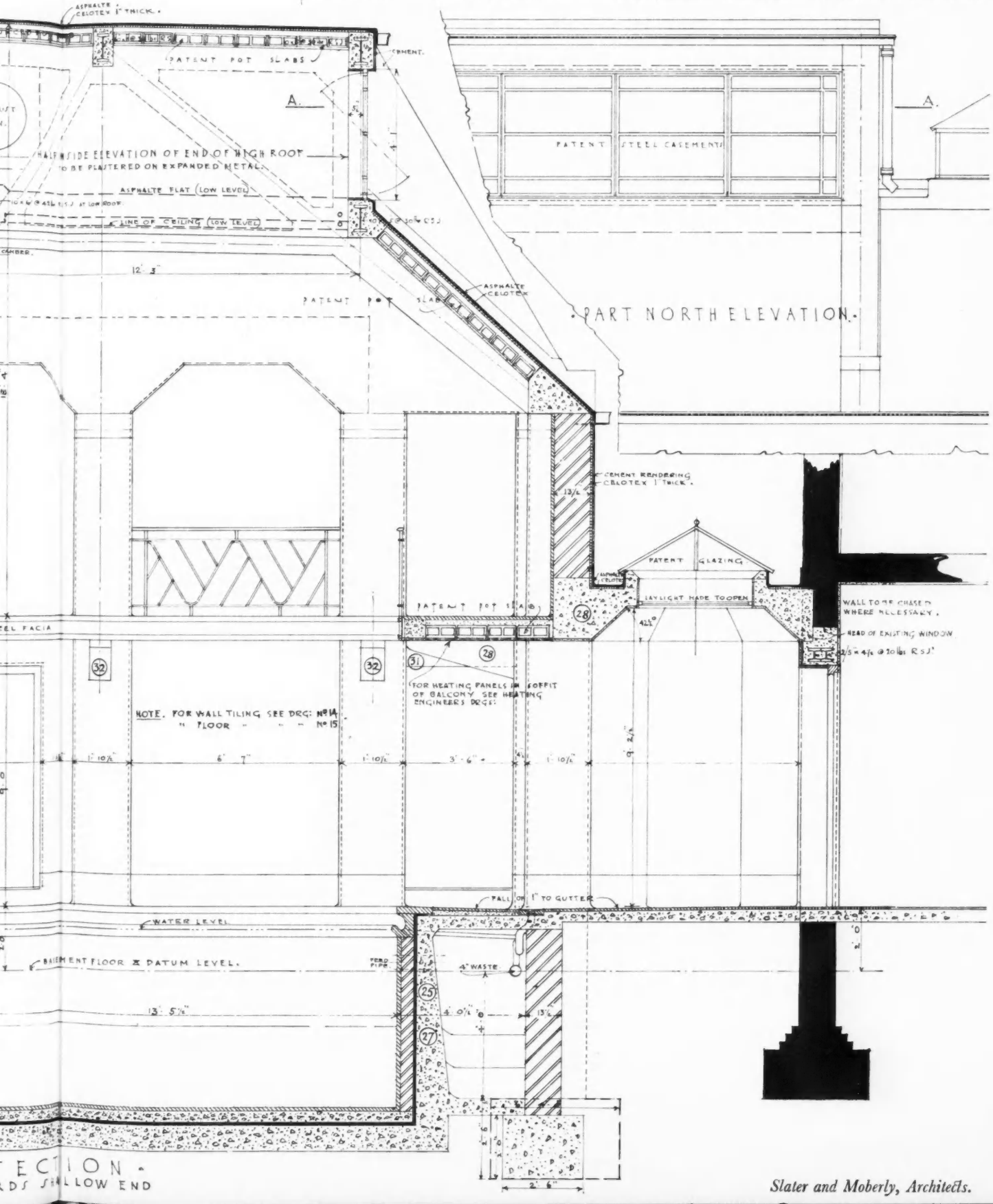
- NOTE - Nos IN CIRCLES THUS (31) INDICATE REINFORCED CONCRETE DRAWING Nos



REET.

DRAWING Nos.





ECTION.
RDS SHALLOW END

Slater and Moberly, Architects.

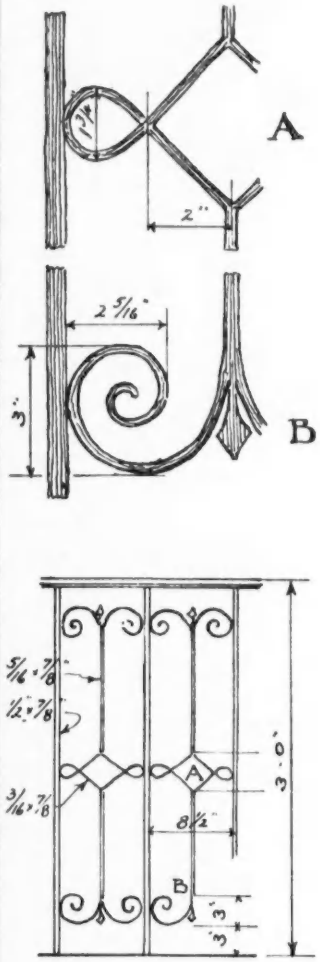
FROM THE NEW WORLD: 6

EXAMPLES OF AMERICAN COLONIAL WROUGHT IRONWORK

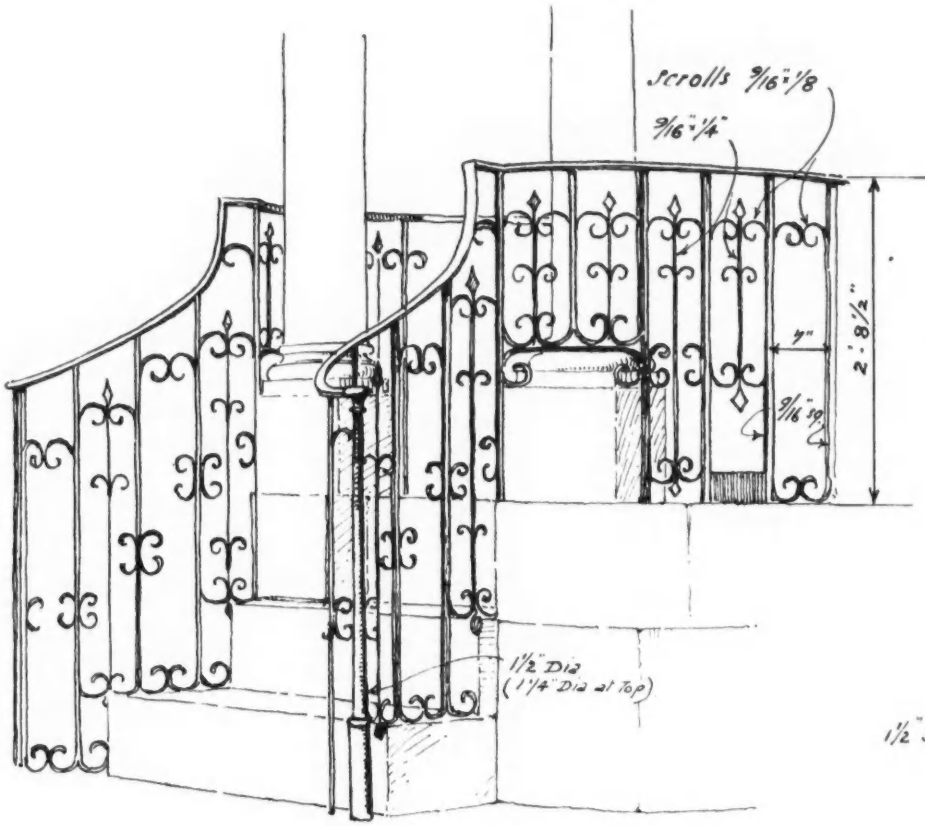
PORCH WITH IRON BALUSTRADES, THE OCTAGON, WASHINGTON, D.C.

AS in the case of other materials, many of the motives for wrought ironwork of the period are clearly taken directly from examples in Europe—more often in England. But the large number of successful designs indicates appreciation of the characteristics and limitations of the material itself, and there were comparatively few attempts to emulate the more flamboyant characteristics of the European style.

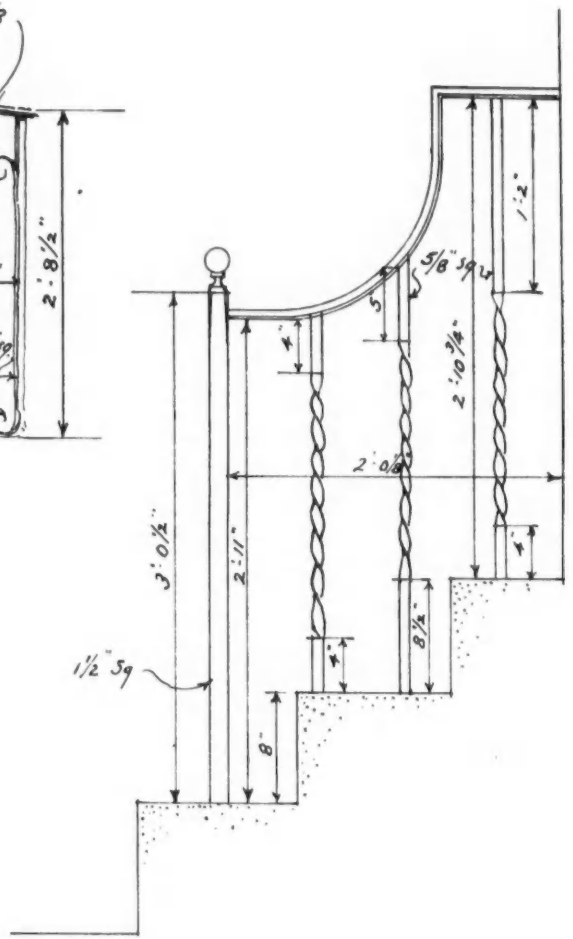
The photographs reproduced above and on the last page show, in position, two among the examples chosen by Mr. R. Keith Harris for his sheet of sketches given within.



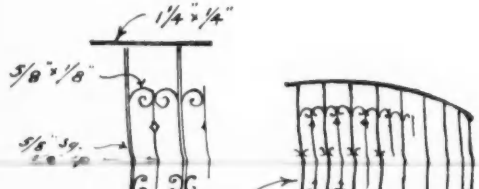
'THE OCTAGON'
WASHINGTON. D.C.

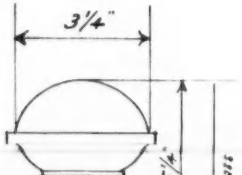


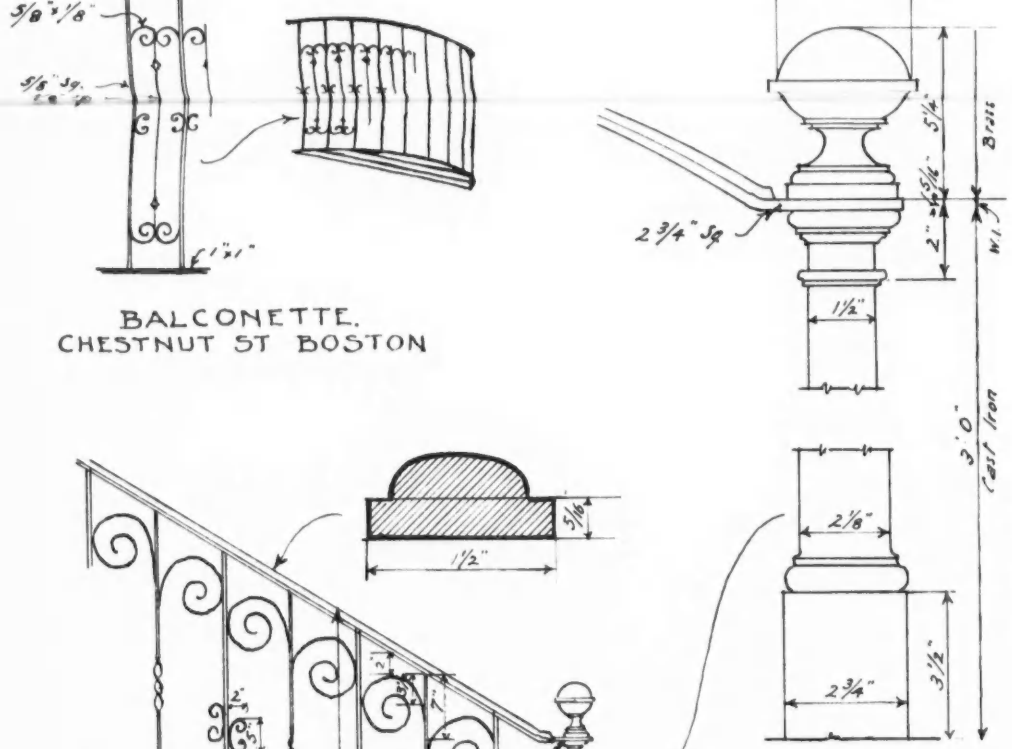
W. I. RAILING CHESTNUT ST. SALEM



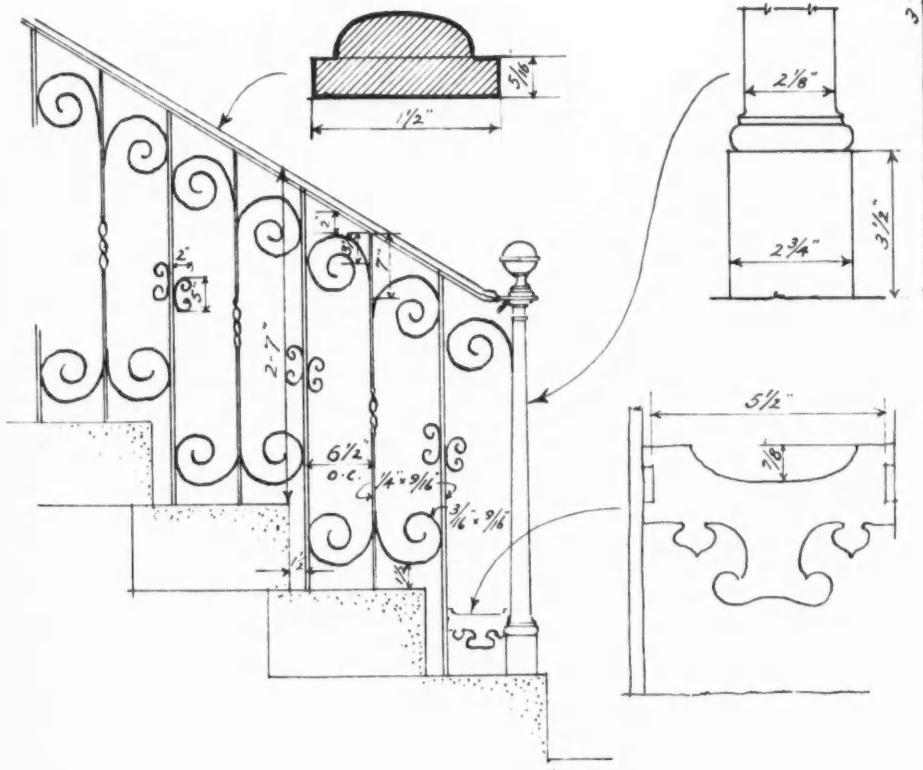
BOWDOIN ST. BOSTON.



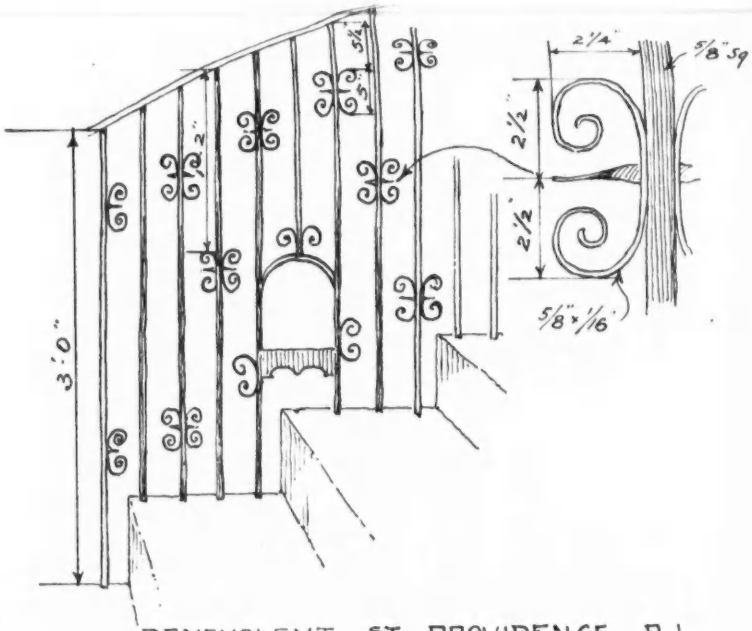




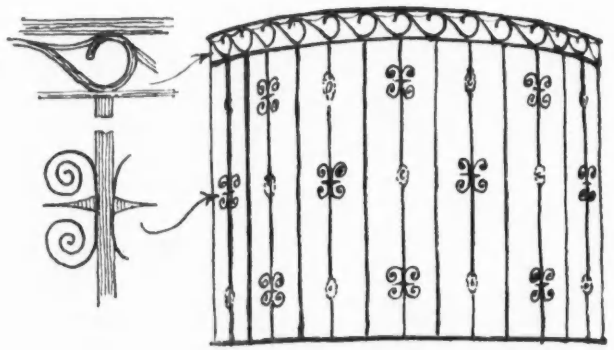
BALCONETTE.
CHESTNUT ST BOSTON



CHESTNUT ST BOSTON MASS.



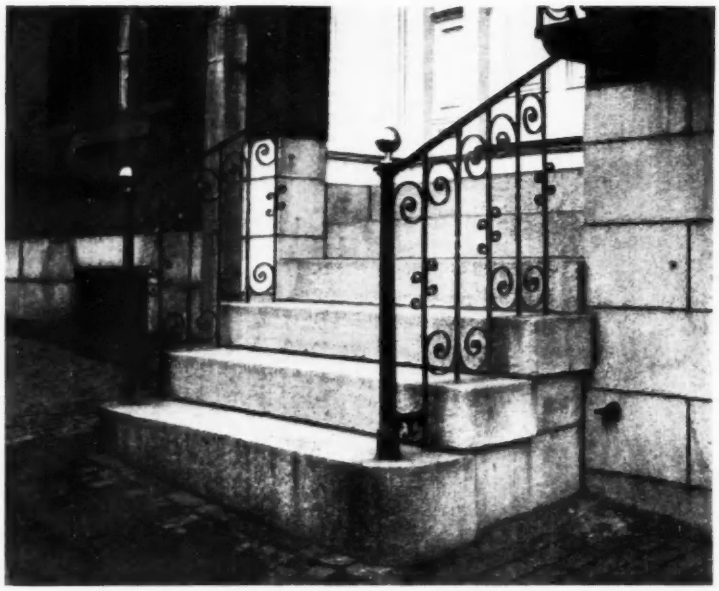
BENEVOLENT ST. PROVIDENCE R I.



BENEVOLENT ST. PROVIDENCE.

SKETCHES OF OLD 'COLONIAL' WROUGHT IRONWORK

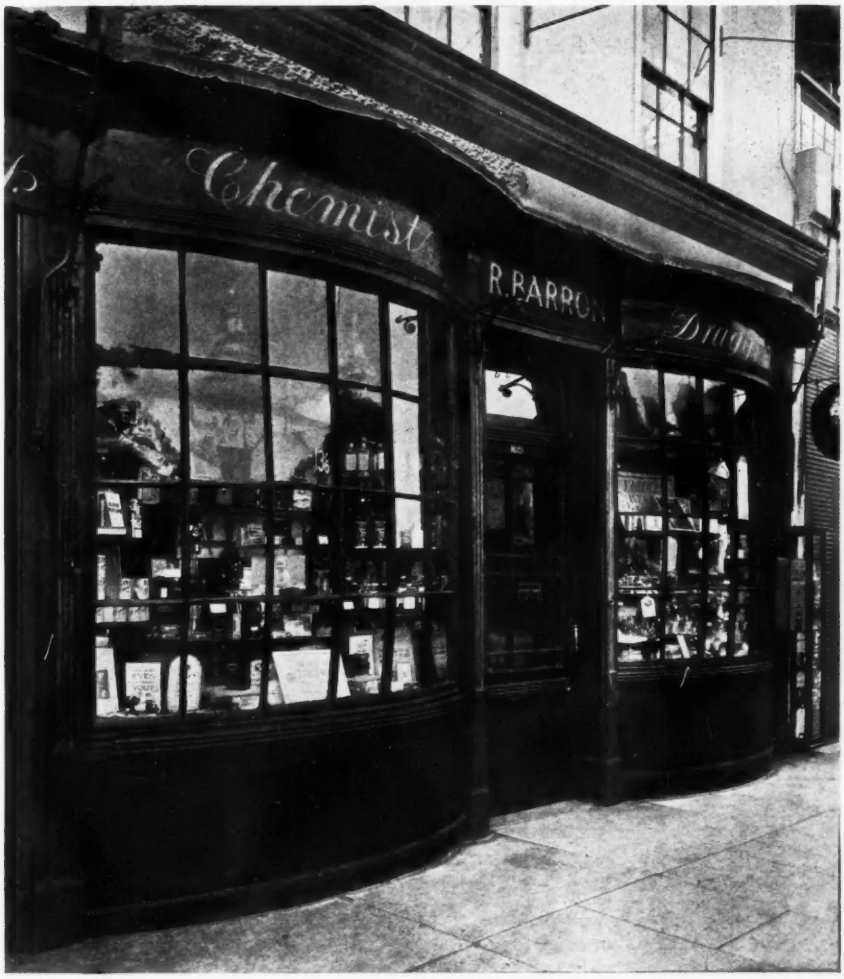
R. KEITH HARRIS. MEM. A. D. E.



BALUSTRADES, CHESTNUT STREET, BOSTON, MASS.

SELECTED PRECEDENTS:

GEORGIAN SHOPFRONTS IN COUNTRY TOWNS



1. *DOUBLE BOW-FRONTED SHOP-FRONT AT EPPING.*

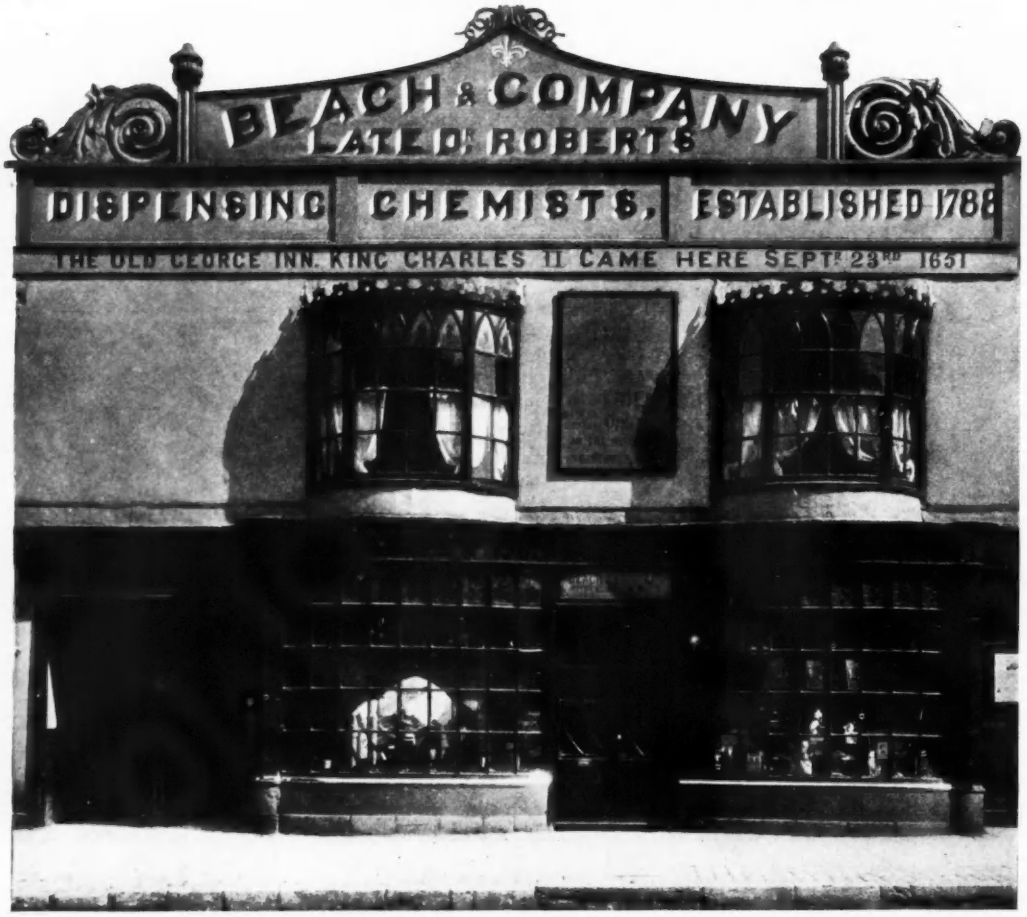
PHARMACIES tend to become hybrid. There are the traditional carboys to be kept in evidence; there are proprietary products in their tens of thousands (no mere figure of speech) clamouring for display-space; there is the professional status of the dispensing side to be preserved—all alongside the paraphernalia of quick-selling and brightly-lit showcases.

There is a call for the architect who can successfully incorporate established professional standards in designs for country pharmacies that typify modern hygiene and merchandizing methods.

Here are three Georgian pharmacy fronts (that somehow have been preserved whilst escaping the notice of the preservationists) quietly, traditionally, but nevertheless progressively pursuing their avocation. Figures **1** *and* **3** *are to be found in country towns on main London–coastal roads, overshadowed by either pompous or more clamorous neighbours. Figure* **2** *is in a Dorset seaport, where a regrettable pediment and enthusiastic sign-writing exploit the gullibility of one type of holiday-maker, while leaving the more reticent windows to tempt within discriminating visitors and residents alike.*

The Epping and Epsom shopfronts have a remarkable affinity in design. Both these shops have been in the hands of chemists for well over a century. The windows of both have a gentle curvature that indicates the transition from the oriel shopfronts of the Queen Anne period.

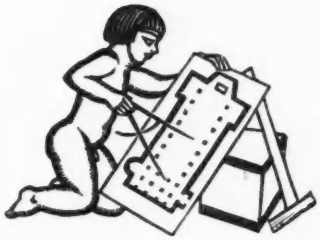
It should be counted unto the owners of these shops for righteousness that they have successfully resisted the tin sign invasion. On only one of the three have advertisers' hanging signs been permitted, and these, fortunately, are sufficiently far removed from the shopfront to prevent them asserting themselves at the expense of the dignity and beauty of its design. A. EDWARD HAMMOND



2. *SURVIVALS OF TWO STYLES AT BRIDPORT, DORSET.*

3. *ANOTHER EXAMPLE OF THE DOUBLE BOW AT EPSOM, SURREY.*

All illustrations by courtesy of The Retail Chemist.



WEDNESDAY, NOVEMBER 4, 1931

P. R. I. B. A.

ONE of the sources of the continued vitality of the Royal Institute of British Architects is the variety of attainment which has been exemplified in its Presidents. Dr. Raymond Unwin is perhaps the first in the long list of distinguished men elected to this office who is not the designer of a number of large and important buildings. Yet, probably no former President of the R.I.B.A. has actually controlled the design of buildings totalling so great a volume of bricks and mortar as has Dr. Unwin.

As the apostle of better housing for the working classes he has, to a greater extent than any other man in this country, influenced the architectural conventions which have governed the design and layout of the small dwellings, amounting to some hundreds of thousands, erected by State assistance since the war. He has tackled architecture, as it were, from the bottom, and has concentrated his attention upon the type of building of which there is the most urgent social need. The generous instinct of service which has animated him in so doing has earned for him the respect of the whole profession.

In the opening paragraph of his presidential address (extracts from which are printed elsewhere in this issue) he tells us that his work " has lain in a humble corner of our field, among the smaller dwellings of the people, seeking to secure for them the benefits of good planning and design, trying to extend these benefits to the estates on which their houses are laid out, and to the towns and regions where the occupants pass their lives."

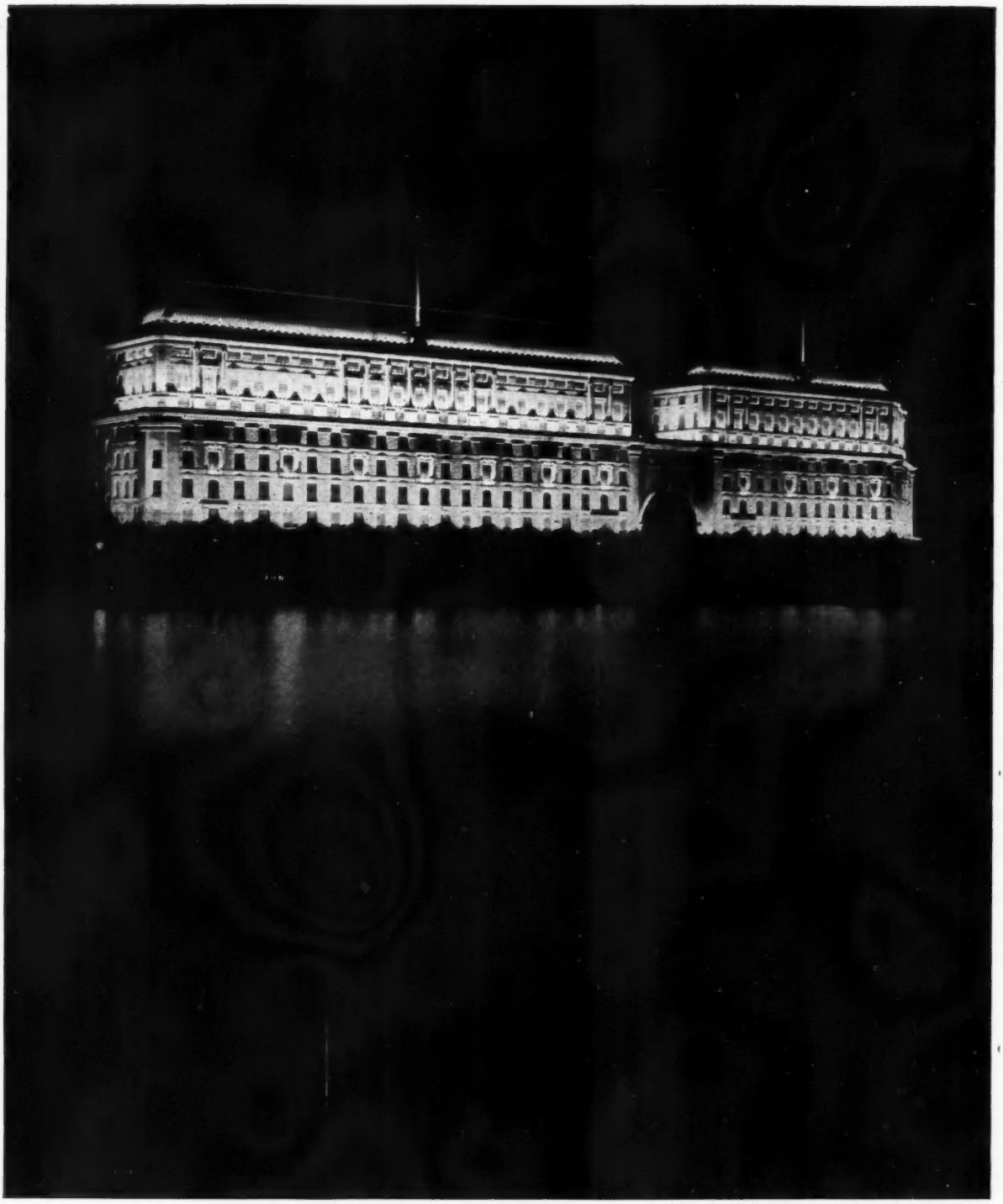
But Dr. Unwin is not only a social reformer. All his life he has been a keen student of the æsthetic element in building, and he interprets this as a harmony to be expressed between the relationship of the parts of a building. Extending this principle, he was irresistibly led to interest himself in civic design, and as one of the pioneers in the English town-planning movement, which has grown so important in the course of the last thirty years, Dr. Unwin has again not only been an indefatigable worker himself but has inspired the activities of others.

His account of how his original concentration upon the design of the small dwelling led him to extend his field of architectural vision is of great interest. He explains that the very inadequacy of the cottage as an architectural unit stimulates the mind to consider the artistic possibilities of grouping these units into larger wholes. " The designer's attention is caught by a range of new relations, which spread in widening rings from the small starting point, like the ripples round the splash of a pebble. Even the larger group, however, provides no resting place, no sufficient sense of completion or domination. It depends still on wider relations : if in a town, to other groups or buildings, to the street or the square in which it stands; if in the country, to the hillside or plain on which it is placed—even to the adjacent trees, which may well dominate in height and mass such a relatively small building."

Surely these are basic doctrines, the truth of which is incontrovertible and cannot be stated too often. As Dr. Unwin points out, the house and the life of its occupants involve relations with the garden, the school, the playing field, the factory, the shops, the theatre and many other places, and with the means of access to and from them. Thus, the architect embarked on this seemingly simple task of cottage design finds himself drawn by this double link of relations towards street design, the laying out of estates, town and regional planning.

When the Battle of the Styles seems to be resulting in ever worse architectural confusion it is of inestimable benefit to the profession that its titular head should recall us to the civic ideal. The argumentative brickbats which fly from " traditionalist " to " modernist " and back again have represented a singularly useless expenditure of energy, for the resolution of this discord can certainly be accomplished if architects would but concentrate their attention upon the street or township. If a " traditionalist " building contributes to the harmony of a street it has the principal architectural virtue, and if it fails to do this it has the principal architectural vice. And exactly the same criterion can be applied to the " modernist " building.

In Dr. Raymond Unwin the R.I.B.A. has a President who is unusually gifted as a public speaker and, moreover, the administrative experience which he has gained as chief architect at the Ministry of Health will be extraordinarily valuable just at the time when the Institute is assuming the larger responsibilities which the Act of Registration confers upon it.



[*Sir Frank Baines, K.C.V.O., C.B.E., Architect*

A SIGN OF THE TIMES IN LONDON

Thames House, Westminster, is an exceptional example of the use of new methods and materials, articles concerning which appear in this issue. It is one of the few buildings designed for architectural effect, both by day and by night.

Among the many external features are two of peculiar interest. The first is the archway and bridge over Page Street, connecting the two blocks at third- and fourth-floor levels: a feature almost unique in London and representing a very special concession by the London County Council and the Westminster City Council. The second is a more daring innovation: the construction of the steeply-pitched roof of steel framing with a waterproof covering of lead and bitumen, upon which are laid great slabs of faience with a dull surface resembling Portland stone.

Internally, there is much unusual equipment, including an automatic system to control and maintain any desired temperature in any one room, heating by hot water in winter and cooling by ice-cold water in summer.

NEWS & TOPICS

Raymond Unwin, P.R.I.B.A. Besides the first garden city at Letchworth, planned in partnership with Barry Parker, and the Hampstead Garden Suburb, he has laid out many schemes.

THE NEW PRESIDENT OF THE ROYAL INSTITUTE

I HAVE received the following letter from Sir Banister Fletcher, the immediate past-president of the R.I.B.A., in which he pays a striking tribute to his successor:

In electing Dr. Raymond Unwin as its new President the R.I.B.A. not only did honour to a distinguished leader in our profession, but gave a striking indication of the importance which the problem of planning has assumed at the present time. For Dr. Unwin may truly be described as the Father of Town and Regional Planning in this country. No one had more influence in the drafting and passing of the first Town Planning Act in 1909. As a pioneer and crusader, he may be said to have naturalized the idea in this country, and, as the chief adviser to the Government for a number of years after the war, he was a powerful influence for good in the great housing campaign. Now he is giving his energies and his vast experience mainly to the problem of regional planning, and we may look with confidence to him, in his capacity as President, to ensure that the architectural profession plays its proper part in this great movement, and is given its proper share of responsibility.

★

Dr. Unwin's name, Sir Banister concludes, is a household word in every corner of the world where town planners, housing reformers and regional planners are gathered together. He is a living demonstration of the fact that if all these movements are to progress on sound lines, the trained architect must take a lead in them, and must be regarded as the predominant figure. The R.I.B.A. is fortunate in being able to draw upon great resources of personality and varied ability in its leaders, and it was never more fortunate than when it selected as its spokesman in the vastly important tasks of the next two years so wise and eloquent and experienced a public servant as Dr. Raymond Unwin.

AN ENGLISH STUDENT'S COMPETITION SUCCESS

Dr. Unwin, by the way, has received a cablegram from the President of the Brazilian Institute of Architects, congratulating the R.I.B.A. upon the success of Mr. J. L. Gleave, who is a student of the R.I.B.A., in the international competition for the design of the lighthouse dedicated to the memory of Columbus. The R.I.B.A. Council, at their last meeting, passed a cordial vote of congratulation to Mr. Gleave on his brilliant achievement.

GOOD BUSINESS

The overwhelming majority for the National Government at the polls last week has proclaimed to the world that this country means business. If early indications count for anything, the result also means business in the more restricted, literal sense of those words. Already I hear of deep-laid plans for the revival of flagging, the capture of new, industries. And that means building and yet more building. Whatever the political views of individuals, I see the nation as a whole tightening its belt and rolling up its sleeves.

BATH ASSEMBLY ROOMS

It is good news to hear that the Assembly Rooms at Bath have been bought by the S.P.A.B. to be handed over to the National Trust. When I last saw them—the Rooms, that is—they were functioning as a rather mouldy picture-drome, and I shed tears in a foyer, the charm of which lay unguessed at by the majority of patrons, who were throwing their cigarette-ends behind the palm trees in the corner. Then there was a great fuss over the old paved space outside, which was saved from the Corporation pick and shovel by determined civic action. I can almost hear the old building sigh thankfully to know itself in safe pasture. Will it become once more a place of assembly?

FOR TOWN PLANNING STUDENTS

The Town Planning Institute have issued a collection of papers read at various meetings which is designed to be of use to examination students. These papers, covering a wide range, should find readers in plenty, besides students, since they have been collected to cover as many aspects of town planning as possible, and include articles on factory development, the design of railway terminals, airports, water supply, etc., few of which are properly treated in the text books.

"MURDER" FOR HOSPITAL FUNDS

The three-act play, "Murder on the Second Floor," which had a long run in London recently, was exceptionally well performed by members of the Architectural Dramatic Society of University College, at their headquarters in Gower Street, last Thursday. The whole of the cast and those responsible for the production are to be congratulated on the high level of the entertainment; the proceeds should help sensibly to swell the funds of the University College Hospital.

NEW MATERIALS: NEW METHODS

The makers of new materials are constantly bespeaking our attention; not always are their methods best calculated to engage our sympathies. The course recently adopted by Venesta in regard to their Plymax products was to address a questionnaire to a number of architects, inviting their criticisms and suggestions in the light of their pioneer experience of them. The results should be mutually profitable; at all events I learn from the firm that the information obtained in response to the appeal for co-operation has been turned to valuable account in the establishment of a technical service department, the function of which will be to furnish data on every aspect of the use of these new materials.

ASTRAGAL

PLYWOOD - P. 590
GLASS - - 594
METALS - 600

FLOORS - P. 605
WALLS - - 610
PAINTS - - 615

THE NEW MATERIALS

EMPIRE DECORATION

A HOMILY: BY OLIVER P. BERNARD

THERE has been an abundance of effusion about what is called modern decoration.

There has been considerable publicity concerning the latest materials and the latest designers of so-called modern decoration.

There are also people who imagine, when the stage, film studios and all other industries decline their peculiar abilities, that their last resource is: modern decoration.

Even those home-beautifiers who have prospered by imitating bygone ideas of decoration have plunged from William-and-Mary suites into exotic cocktail bars, glass dining rooms and fantastic bathrooms without worrying much about the kitchens.

Unfortunately, international industry and government have broken down. The course of both architectural and empire decoration will now be directed by conditions of brutal necessity.

Designers of country seats for retired public school boys, and apartments for those who exist on unlimited doles, are now nearly all out of work.

Our latest war memorials are beginning to crumble, and other symbols of private and public waste are done, all but a few choice banks, tasty office buildings and some desirable but apparently empty blocks of not inexpensive flats.

Adversity is now our Master Builder!

Adversity is going to teach us more about government, industry and architecture than was ever anticipated by our deluded leaders in their bygone dreams of commercial supremacy.

Adversity will call on all good workmen to show that social progress is born of experiment—genuine experiment, with honest purpose and materials.

If the expression "modern decoration" means anything at all, in future, the terms "better" and "cheaper" will prove synonymous.

The public are supposed to suffer from a craving or passion for change: change in government; in styles of architecture; methods of decoration; and so on.

Statesmen, politicians, princes, prelates, presidents and parasites are constantly talking, writing, flying and broadcasting their views on the subject of change.

But it so happens that people are not looking for change.

What they—you and I—want is not change, but improvement.

The difference between change and improvement, in government or furnishing a home, is quite astounding, in contrast and cost.

Whatever modern decoration, new decoration or the latest decoration may be, there is still unlimited scope for improvement.

Decoration can only improve by strict calculation of its necessity.

INSPIRATION FROM JAPAN

SOUND design has existed in Japan for centuries. It is an architecture which could not possibly be imitated in the European climate; it is an *inspiration*, not a *precedent*. Its principles, however (which are similar to our own), are easily apprehended.

The details on page 587 are of the "first room" (of the master of the house) in a typical Japanese dwelling of the first class. Japanese traditional dwellings are divided into the following classes: Palatial, first, second and third classes, and common dwellings, i.e. five classes in all. This room is usually at one end of the long leg of an L-shaped plan. It commands the best view on to the private garden, and is farthest away from the service and women's and children's quarters, etc. There are always two corridors leading to all rooms, one for servants, one for the owners.

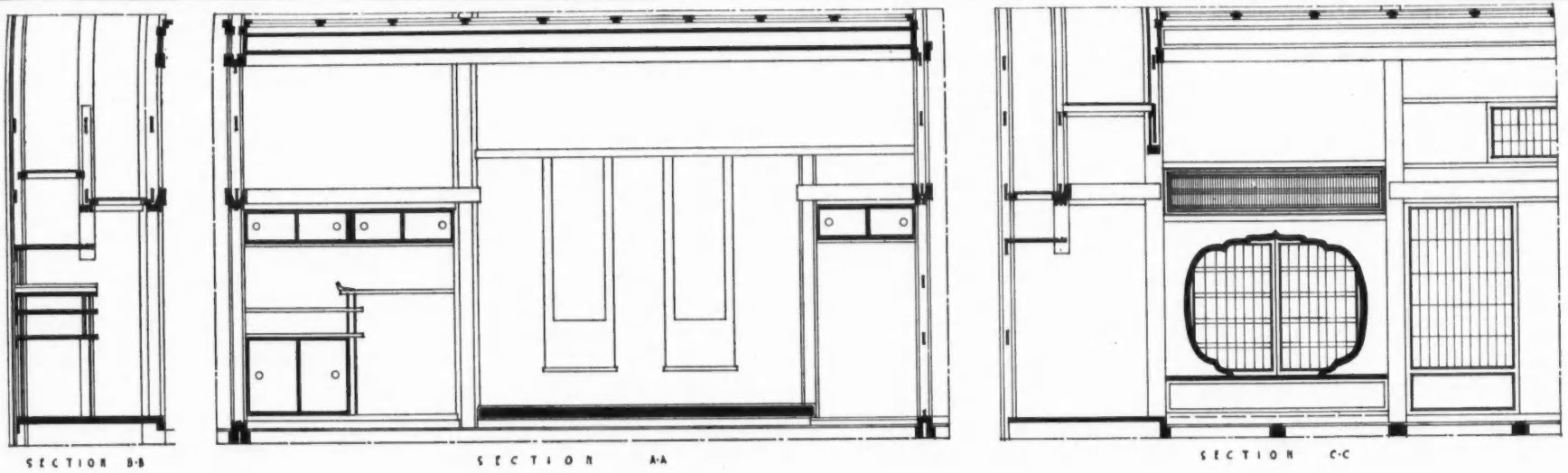
The sections show the arrangements of the two special features in the "first room," i.e., the formal alcove, where, and where alone, a single painting scroll or poetry scroll is placed, and, at either side, the shelves, which usually bear one bronze or other *objet*, or a vase of very carefully arranged flowers or branches of flowering trees, with cupboards for the paintings, *objets*, etc., not actually displayed. The ceremonial window, shown in one of the sections and on plan, is there for the specific purpose of framing the picture to the formal garden beyond. The opening has a surround in ebonized wood or lacquered wood, and is not meant to provide a decorative element to the interior. The Japanese believe in leaving decoration to the individual artist, including the gardener, whose work may be displayed and changed as desired.

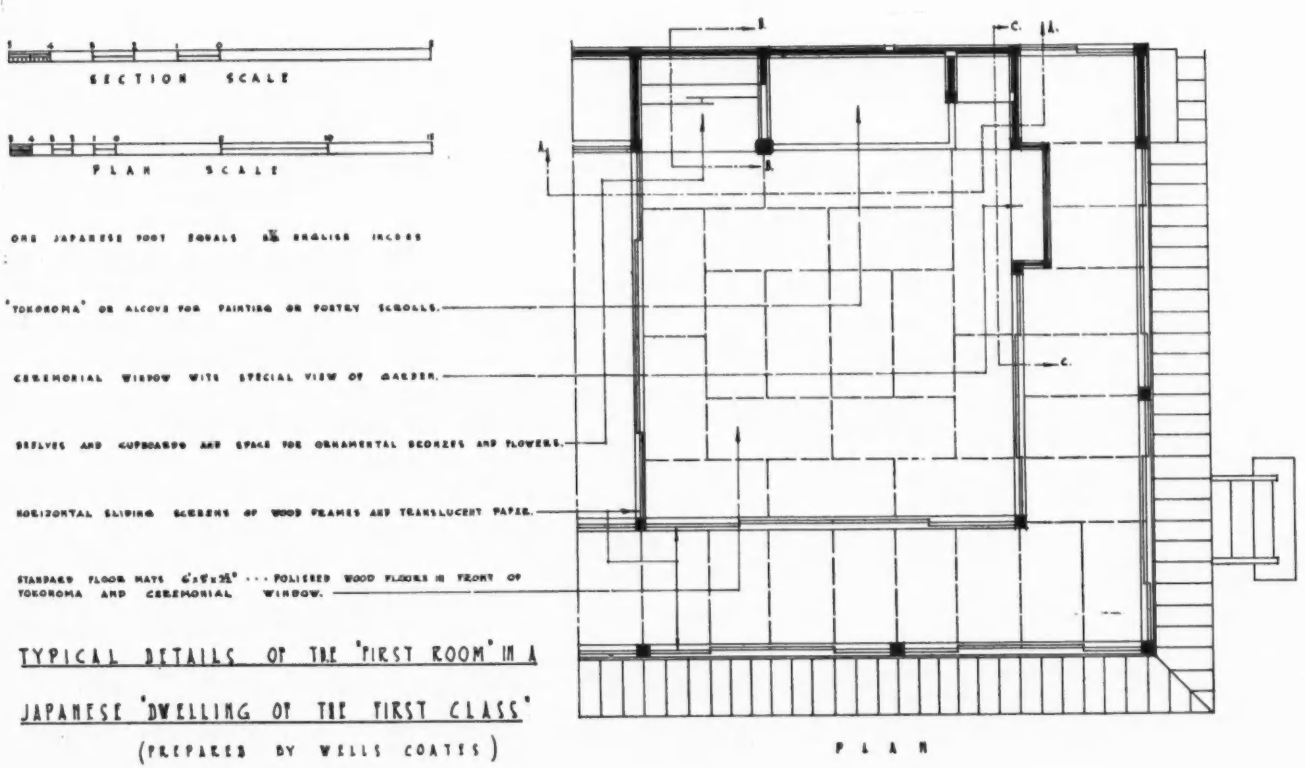
All the structural members are of wood, and the construction is "post and lintel," with cantilevered roof members. There are no supporting walls. The floor is boarded and covered with the standard mat, which is 6 by 3 Japanese feet [one Japanese foot (10 inches) equals $11\frac{7}{8}$ English inches], by about $2\frac{1}{2}$ inches thick. Made of compressed straw (like thatch-board), and faced with a finely woven straw matting, and edged, usually, in black closely-woven cotton fabric, the size of the mat is the same for all classes of dwellings, and determines the proportions of the plan of dwellings in each class. The screened divisions between rooms, and between rooms and corridors, vary in the different classes of dwellings. The heights of the rooms usually vary according to the number of mats.

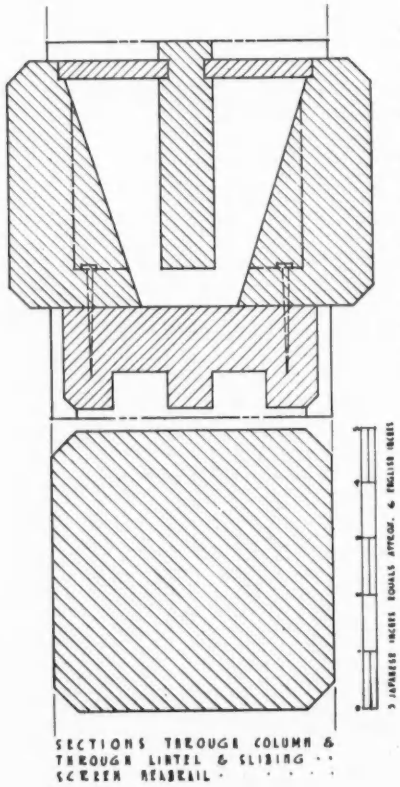
The sliding screens are framed in wood, with usually a solid panel at the bottom, the remainder being papered with various qualities of translucent paper, which has also insulating properties. The few immovable walls (shown solid black) are two fixed screens of lath and plaster, with a cavity between. The laths, made of reeds, are usually made up to the required size of the opening into a lashed-up square-mesh mat (compare "expanded metal" lathing) and fixed on site to the wooden members; then plastered. The Japanese can make a straight plaster-to-wood joint without a cover-strip or moulding of any kind, *which will not move.*

The space above what would correspond to the transome line over the windows, or sliding screens, is usually plastered in the same way, up to the ceiling (there is no cornice), the ceiling being boarded (or coffered), but rarely plastered.

All the wood members, posts, lintels, ceiling members, etc., are actual *structure*, suited to a country where earthquakes occur, say, once a month. Nothing is "planted on"; everything does a structural job. WELLS COATES







TYPICAL DETAILS OF THE 'FIRST ROOM' IN A JAPANESE 'DWELLING OF THE FIRST CLASS'

(PREPARED BY WELLS COATES)

MATERIALS FOR ARCHITECTURE

BY WELLS COATES

". . . Building up themselves in spirit, and looking out and forward with larger ideas born from the variety of their crafts (the ancient architects) began to build. . . . Then, by the observation made in their studies, they were led on from wandering and uncertain judgments to the assured method of symmetry. When they observed that Nature brought forth profusely, and provided materials abounding in usefulness for building, they handled them with fostering care, and equipped with delights the refinements of life."—Vitruvius, *De Architectura*, Lib. II. Cap. I. 7.

". . . Yet, we must not be surprised if excellence is in obscurity through the public ignorance of craftsmanship. . . . As Socrates thought, if human notions and opinions and knowledge were manifest and transparent, neither influence nor intrigue would avail; but commissions would be entrusted to such persons as had attained the highest knowledge by their genuine and assured professional labour. Since, however, these things are not conspicuous nor apparent to the sight, and I perceive the ignorant excel in influence rather than the learned, I judge that we must not rival the ignorant in their intrigues."—*Ibid.* Lib. III. Pref. (Frank Granger trans., 1931).

§ 1

IN England, now, architecture is mostly written about. The Mistress Art has become, so to speak, the Chief Place for the Battle of the Styles: a battle waged, of course, for the most part with words (paper pellets of the brain); words, the colossal power of which is one of the major iniquities of this Age of Science.

A space must be cleared, all said and done, round this hurly-burly of words. No man can reflect and create while thus engaged. There must be a return to logic and the facts.

Concerning Architecture, what can be stated *can be stated clearly.*

All that can be stated is included in the materials for Architecture. For the rest, architecture is shown, seen and used.

Materials for architecture are, first, the whole of human activities, customs, habits, and needs—intangible raw materials !—which the architect studies most closely, circumscribes most clearly, *orders* most carefully, and (supreme function) equips with refinement and delight, as Vitruvius said. It is out of these materials—now permanent, now changed, now changeable—that the principles of his art are fashioned.

Materials for architecture are, secondly, the whole of the materials " brought forth profusely by Nature and abounding in usefulness for building."

Of the first, the " human " equations (with their Coefficients of Ignorance, no doubt) I cannot here treat. Of the second, the " material " equations (which derive their value from, and also give fresh values to, the " human " equations), my endeavour is merely to introduce the more detailed statements hereafter to be made, in this place, by various authors, upon specific materials.

Further to pursue the mathematical analogy: our statements, so far from being treated as wholesale verbal generalizations (so easily slaughtered by one little ingenious paper pellet), should be capable, I trust, of being read as mathematical equations are read. For words and phrases include their variables, and the total value of the sentence-equation is not to be assessed without reference to the specific purpose for *its* specific values. If the specific value be zero, the equation still stands, you see, for other values.

Thus, we may be bold to make statements of general validity without fear of being misunderstood in the particular case. Amongst enlightened people there should be no difficulty in assessing these values. Amongst those whose interest is to listen to, or to preach, æsthetic theories—or whose interest is in words, chiefly, for their own sake—there will be, as usual, merely the wish to prove you wrong.

§ 2

ALL that can be stated about architecture is included in the materials for it.

Materials for architecture have always been contingent upon man's discoveries: they have never been at any time fixed and settled, except by the force of Convention. (The value of Convention is that it provides a breathing space for man to reflect and create.)

Invention, which Vitruvius defined as " the treatment of a new undertaking disclosed by an active intelligence," has recently brought to the service of architecture vast resources through the discovery of new materials.

The discovery of new materials brought with it (as always) new principles of construction, *inherent in the materials.* When man discovered steel, he did not think to make bricks of it, but he *did*, later, fashion it into Corinthian columns ! Observe the Coefficient of Ignorance, *inherent in the Man.*

Craftsmanship, which Vitruvius defined as " continued and familiar practice, carried out by the hands in such material as is necessary for the purpose of a design," created *possibilities* for the new systems of construction: these possibilities in turn created newer materials, and, again, more refined principles of construction.

And finally, out of all these together, out of invention and discovery, new materials and new structure, craftsmanship, with intellect and action added, and all allied to art, there came the *new forms*, inherent in the new materials. (The new forms were " of the thing itself, never on it " as my Japanese tutor first taught me.) And the new forms made it possible to cater more perfectly for human needs. Conversely, new human needs were created, new habits, new activities were made *possible* by, the new forms.

Thus, " looking out and forward with larger ideas born from the variety of their crafts," twentieth-century architects may begin to build.

§ 3

THE forms of twentieth-century architecture are not the forms of the architectures of the past, by the nature of the logical case.

Whatever the æsthetic case for a misalliance of forms may be, I do not here inquire.

I only say briefly, and in parenthesis, that the people get what they deserve, or what they allow, or what is not completely beyond them to appreciate. They would appreciate, it is true, another Georgian Renascence even less than architects would appreciate the fatigue of it. But they are ready, they are ripe, to appreciate Science.

That appreciation, that knowledge, which the common man has often hardly come by, wherever he can get it: in theory, or in practice, by tinkering with his old motor-bike in the back-yard: *that* is the fund of interest and sympathy upon which the twentieth-century architect has to draw.

§ 4

THE invention of steel, and the elaboration of systems of construction based upon its properties, has alone created the greatest revolution in the history of architecture, affecting all its aspects, external form and internal organization, plan as well as elevation.

Large spans, with comparatively slender vertical supports, create new possibilities of freedom and economy in planning. The principle of the cantilever finds its true free form when expressed in terms of steel, steel-concrete, and steel-glass.

Most important of all, the wall, no longer an essential element of structure, becomes (truly considered) an expression of its thermal and other insulating functions—to include or exclude the light, the view, the weather, or the public—functions whose separate and relative values are to be determined by the conditions of the specific purpose of the building. Again, apertures are not so much cut out of the walls as left out of them. The light-admitting function of the walls by day will determine the choice of source—at approximately the same zone as the windows—for the media of artificial light, in order not to alter the values of the spaces of rooms.

Internal "walls," again, having no structural significance, become screens possessing thermal, acoustic or other *functions and qualities*, as may be desired. Logically, internal screens ought to become capable of much greater comparative imperviousness and/or flexibility, at will. Actually, present acoustical practice has advanced no further than excessively-contrived and expensive means of absorption of sound, which often result in displeasing and not easily maintainable interior finishes. At the moment, the desirable aim is the lessening of *unnecessary sources* of sound. The acoustical requirements of interior partitions vary according to the different parts and purposes of buildings. As an alternative to the methods which rely on special wall-finishes, it is possible to supply the deficiency of completely effective or economic acoustical treatment by using built-in cupboards as partitions between adjacent rooms.

Where interior partitions are not required to be sound-proof, they can very easily be made to serve a new purpose, by being movable. To alter the dimensions (and so the purposes) of a given room at will, has definite possibilities of usefulness which have yet to be explored in this country.

Thermal insulation has always received a much greater share of attention. In this case, the most important improvement is the economy of means, and the avoidance of waste. Of interior heat, for instance: "the simplest way without waste."

Among the new materials for architecture (affecting its form) must be included the machines, engines and processes incorporated into the modern building. Such are heating, lighting, ventilating, refrigerating and sanitary processes, and the machines for vertical circulation. Instead of being added on to the completed building, they are, or ought to be, integral with it, a part of its construction, and therefore of its form.

The same principle of integration can be extended to include furniture designed into the house as part of architecture. Here again, a modern need precedes and reinforces the innovator. Namely, the habit of moving often, indescribably costly and upsetting if it implies an accompanying trail of large pieces of furniture, creates the urgent need for the strictly more economical innovation of built-in furniture and equipment of every kind. Very soon it will be considered quite as fantastic to move accompanied by wardrobes, tables and beds, as it would seem today to remove the bath, or the heating-system, including the pipes.

In this sense, the materials which the twentieth-century architect handles are many times increased. To order them, that is, to design them into place, is the very *raison d'être* of his art.

§ 5

THE danger is that this new freedom of design, arising primarily out of the properties of steel, steel-concrete and glass, makes possible the operation of the new forces, unleashed and uncontrolled, far beyond the boundaries which sincerity and a rigid respect for conspicuous economy and simplicity must set down. It has been responsible for a number of fantastic and ill-conceived architectural fashions which (referring back to section two) can be marked down in value by the operation of the "coefficient of Human Ignorance."

"Plasticity as continuity in actual construction, flowing or growing into form, rather than cut up or built up of small-jointed pieces" is Frank Lloyd Wright's operative test of twentieth-century architecture.

Another kind of critical argument states that many of these principles of design were inherent in the older materials, and even in certain of the older architectures. In Japan, for instance, walls have been screens for centuries. And the restricted use of the cantilever principle has been the basis of many architectural forms. The point is that the new material, steel, has so far extended these principles as to create, so to speak, *a new dimension in their use*, and that the *scale* of traditional details of construction and finish has been entirely destroyed.

The forms of twentieth-century architecture are not concerned with "pencil-forms" but with shapes. A shape is achieved by clean lines, clean surfaces, clean purposes. "Clean does not mean plain, but it does mean significant." Structural features are not disguised, but fully expressed and *clothed*. All the known and well-tried architectural accents may be retained, and reinforced by a new and vigorous accent upon pure forms, proportion, symmetry, colour, and the new and invigorating properties and qualities of new materials. "It is from the plan of a temple that the effect of its design arises" said Vitruvius. Twentieth-century architecture begins from the plan as generator, and makes explicit externally the processes, functions and qualities included in it. Out of the very complications and difficulties of the task, twentieth-century architects will discover the principle of simplicity, which is the successful integration of many functions, and of the properties and qualities of the materials for architecture.

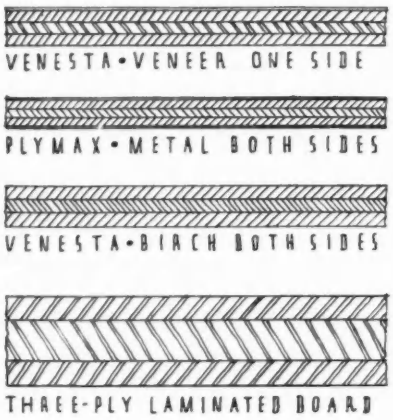
§ 6

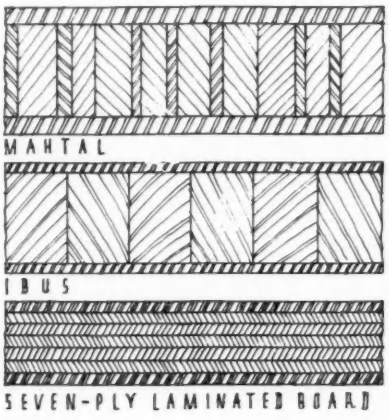
IT is for architects to realize the possibilities of our lives, now, in an age of Science, when life *could almost immediately become free*, that is to say, ordered, and refined, for all classes. Imprisonment (with torture) in the strait-jacket of old forms, a pretence to beauty at second-hand? Or liberation (with refinement and delight) into movement, balance, harmony, *order from in outwards?*

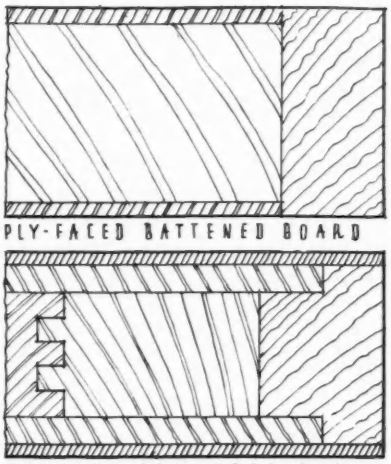
That is the choice; the use of the new resources of materials as the prisoners—the slaves—of old habits, old social prejudices, old *visual* prejudices; or as the means to new forms, new habits of life, a new vision. The time has arrived for architects to reflect and to create.

The above notes are transcribed from the sketches for a book on the subject, "Materials for Architecture," which the author now has under preparation.

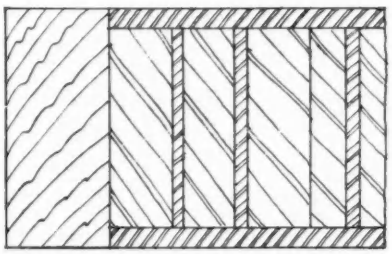
PLYWOOD



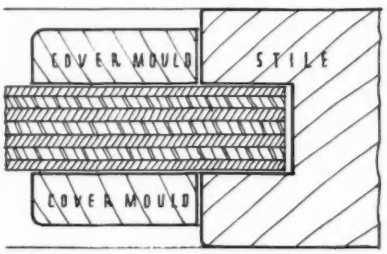




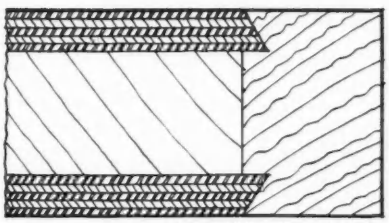
ALTERNATIVE FIXINGS FOR HARDWOOD EDGES & DOORS



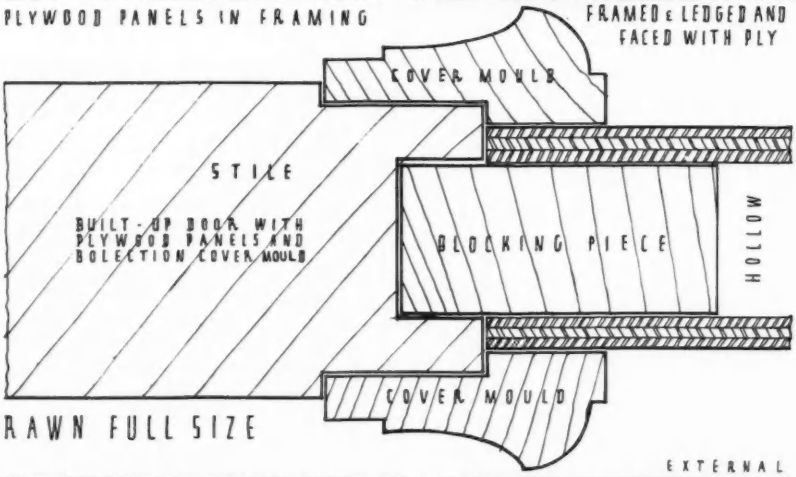
HARDWOOD EDGE TO MAHTAL DOOR



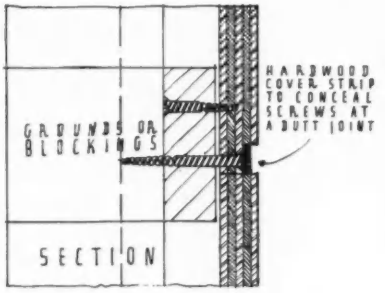
PLYWOOD PANELS IN FRAMING

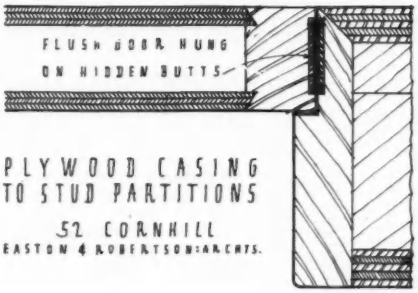


FRAMED & LEDGED AND FACED WITH PLY



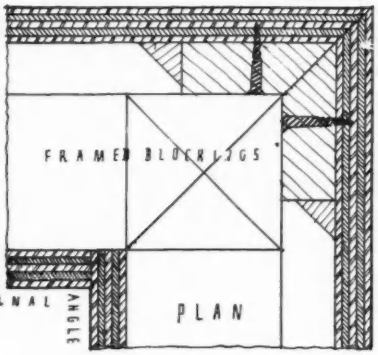
ALL ABOVE DETAILS ARE DRAWN FULL SIZE



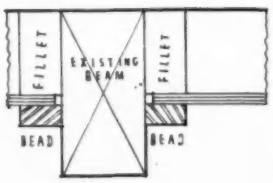


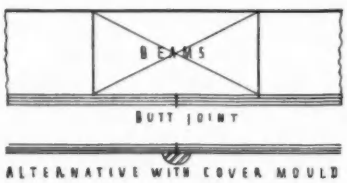
PLYWOOD CASING TO STUD PARTITIONS

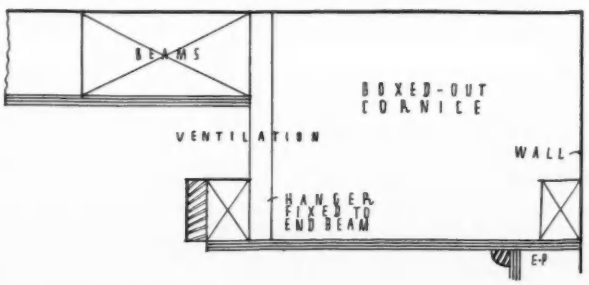
52 CORNHILL
EASTON & ROBERTSON: ARCHTS.



HALF FULL SIZE







PLYWOOD CEILINGS
QUARTER FULL SIZE

PLYWOOD, LAMINATED BOARDS AND VENEERS

BY J. MURRAY EASTON

Plywood provides a firm basis for the most daring efforts of modern designers and craftsmen, and in a few years its use has increased the scope of interior decoration in an amazing way. Its application to commercial uses has been no less widespread, but this article is concerned chiefly with its uses in building.

PLYWOOD, regarded philosophically, is one of man's best answers to Nature's instinct for self-destruction. The mulish obstinacy displayed by wood in twisting, shrinking, cracking and generally fidgeting about has been a source of annoyance to mankind from the earliest times. Seasoning drying, kiln-drying are good discipline, but time is of the essence of this treatment, and time is what the present age most lacks.

The real cure for undesirable energy in any form of life is to match it with a contrary energy of about its own weight: hence the pervasion of plywood. Beneath the veneer there is an unending struggle going on—pull devil, pull baker—and the whole art and practice of plywood-making and veneering is the maintenance of the balance of power. A veneer on the front of a panel unmatched by a veneer on the back may easily destroy that balance, with results obvious to the eye.

Thus far the term "plywood" has been taken to include laminated wood, but it is well now to consider these separately. Plywood consists of three, five, seven or more sheets of veneer cemented together with a waterproof cement under great pressure. The sheets, generally of birch or gaboon mahogany (so called), are rotary cut—that is, peeled from the log by a knife, much as a pencil sharpener works, only the knife is the same length as the log and parallel to it. Each layer of veneer, being laid at right angles to the next and firmly fixed to it, prevents its neighbour from shrinking (and is in turn prevented from shrinking) across the grain. Thus we have an unshrinkable, strong but springy material that is cheap and suitable to a great variety of purposes. Plywood is commercially available in sheets up to 84 ins. by 48 ins. and in thicknesses from $\frac{3}{32}$ in. up to $\frac{7}{8}$ in.

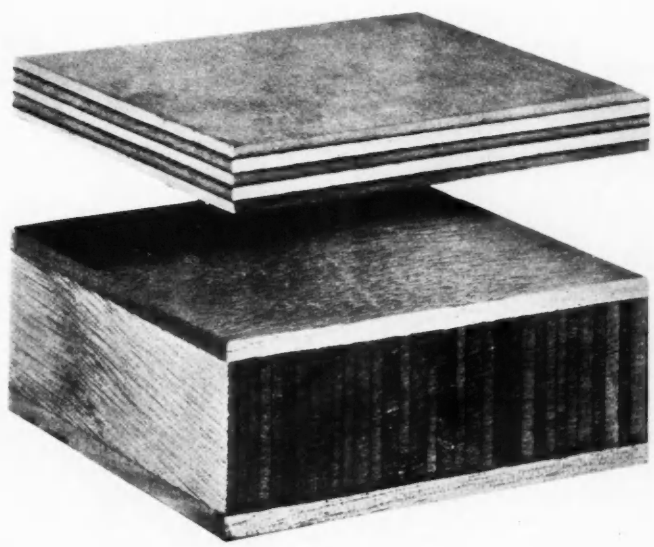
Grading according to quality of surface veneer is now common, so that birch ply can be had in several degrees of freedom from knots and flaws. The best birch panels, if carefully selected for grain, are scarcely inferior in effect to sycamore veneer. Plywood can also be obtained ready-faced with veneers of the commoner hard woods, such as oak, walnut and mahogany, and an interesting and valuable development is the application of a top veneer of thin metal sheets. The varieties and uses of this material are, however, too great to be dealt with in this article. Laminated board consists of a core of strips, most commonly of gaboon mahogany, laid at right angles to the surface of the board and encased by layers of veneer. A thick block of laminations is first prepared, sawn across the layers to the required thickness, cemented edge to edge and finally encased in the surface veneers. The cementing takes place under great pressure and the wood is previously kiln-dried to a specified moisture-content.

Obviously, this brand of formation does not lend itself to thin sheets, and though they may be obtained as little as $\frac{3}{8}$ in. thick, they are mostly sought in $\frac{1}{2}$-in. sizes and upwards. Thicknesses up to 2 ins. may be obtained, and the sheets are to be had up to 15 ft. by 5 ft.

Laminated board, though less strong, thickness for thickness, than plywood, tends to be more rigid, and is less inclined to warp, though it certainly will warp if it is carelessly stacked. A variant of laminated board consists of a core of thicker pieces of wood, frequently chestnut, dovetailed together and clad in veneer. This method of construction is favoured by several makers of flush doors.

Doors, indeed, provided the earliest field for plywood and laminated board, and before the war few of us ventured further in the use of plywood than specifying three- or five-ply panels for ordinary framed-up doors or selecting one or other of the proprietary hospital-type flush doors. Now, nearly every joinery works produces flush doors. The simplest and cheapest variety consists of a frame clad on both sides with three-ply. Such doors should not be less than $1\frac{1}{2}$ ins. thick, and the makers generally advocate 2 ins., so that they are unsuitable for such purposes as wardrobe doors. Laminated board is indicated when the door is required to be thin or fire-resisting, or where a specially veneered surface is wanted.

It is in the treatment of wall surfaces that plywood and laminated board have achieved the most striking results. The more sumptuous effects are not obtained without the application of specially selected veneers, but the better qualities of commercial plywood, either birch or gaboon, can be made to yield admirable results at a relatively small cost. The offices of Messrs. Venesta at



PLYWOOD AND LAMINATED BOARD

A special waterproof cement holds together the layers of plywood, laid with the grain alternating; shrinking and swelling are thus minimized. In laminated boards the principle is applied to larger masses. The cementing of the laminations takes place under great pressure.

Vintry House provide interesting examples of the successful use of the material, some of which have been illustrated in supplements to this JOURNAL.

The designer, Mr. Grey Wornum, has enhanced the colour of the natural wood by contrasting it with lines of vivid colour. Messrs. Venesta have kindly supplied me with the costs of the various rooms, analysed to show the expenditure on the plywood, the framing and backing, the colour and polishing, etc. These indicate (and this is confirmed by my own experience) that the expenditure on the plywood itself may be a very small part of the cost of a finished room. Breaks and returns, and everything requiring framing "hit up" cost far more than the substitution of a more expensively faced plywood.

COST OF PLYWOOD FINISHES TO OFFICES AT VINTRY HOUSE

	Plywood Used.	Plywood (Prime) Cost.	Construction Cost.	Staining and Polishing.	Total.	Approximate Cost, sq. ft.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.
Room 1	Birch ..	29 4 1	83 1 0	12 8 6	124 13 7	4 9
,, 2	Padouk ..	35 13 10	227 0 1	7 18 8	270 12 7	10 9
,, 3	Walnut ..	47 19 1	139 17 3	7 17 4	195 13 8	8 0
,, 4	Teak ..	19 17 8	88 4 11	17 4	108 19 11	5 6
,, 5	Walls: Birch .. / Doors: Walnut ..	53 4 11	333 1 6	2 1 4	388 7 8	18 11
,, 6	Birch ..	40 0 0	100 0 0	32 5 8	172 0 0	7 0

Painted plywood is perhaps in most cases a too costly treatment for walls and ceilings, but in special cases, notably in shipwork, it has great advantages. Nearly all the ceilings of the *Bremen* are finished with laminated board in panels having slightly sunk margins. They are painted and varnished, and the silky finish obtained is something that I have never seen equalled elsewhere.

Although plywood is built up of veneers, the word "veneer" generally calls to mind a special skin of fine wood superimposed on the plywood or laminated board.

Veneers are classified as rotary cut, knife cut and saw cut. The first process has already been described. Rotary cut veneers do not, as a rule, give a good figure, though birch is an exception. In the process of knife cutting the log is first quartered into flitches (see diagram). The flitches, having been steamed or boiled, are placed on the slicing machine and cut into layers. Various thicknesses are advocated, but Mr. Leslie Jenkins, to whom I must make acknowledgment for much valuable information, considers that the best thickness is 1/28 in. or 1/30 in. When the layer is thinner, the glue will come through too readily. When thicker, the grain of the wood is apt to be distressed.

In cases where thicker veneers of high-grade wood are required, saw cutting is resorted to, and such veneers are generally 1/12 in. to 1/16 in. in thickness. Some high-grade woods, however, such as burr walnut, cannot be saw cut.

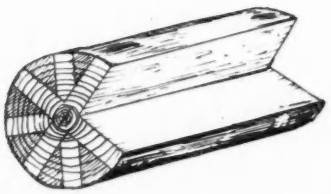


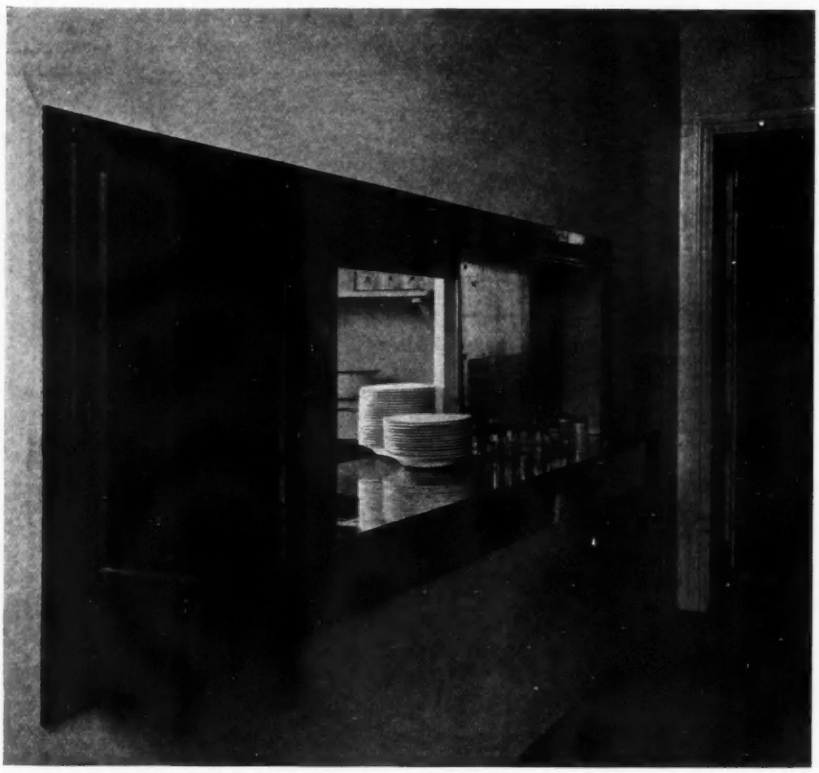
DIAGRAM SHEWING QUARTERING OF LOG INTO FLITCHES FOR VENEER

Some of the most richly-figured veneers are obtained by special cuts: "oysters" by cutting diagonally across the trunk, or by cutting special parts—"burrs" from the gnarled excrescences found in oak, elm and many other timbers. "Curls," peculiarly attractive in mahogany, are cut from the trunk just below a branch.

The variety of woods which make satisfactory veneers (whatever may be their deficiencies in the solid) is so great that it is impossible to deal with more than a few, and the commonly-used veneers need not be referred to.

Among English veneers the following may be noted: Burr oak and burr elm (the former a rich golden brown and the latter a peculiarly lovely grey with pinkish shadings); yew (a golden pink); cherry (a cheerful brown-pink); pear (somewhat like cherry but lighter in colour); holly (white).

Empire timbers provide a rich selection of veneers. Among these from Australia are: Silky oak (mottled, rather hot in colour); mountain ash (a charming rippled grain of cool light fawn colour); maple (moiré silk effect, light mahogany colour); blackwood (like a dark teak with a slight fiddle-back grain, not to be confused with black bean); walnut



Oratory Central Schools, S.W.] [*Christian Barman, Architect.*

METAL-FACED PLYWOOD

This serving hatch is constructed of plywood faced with a stainless and acid-proof metal. The architrave is painted a vivid scarlet colour.

(duller than English but a useful wood, and, by the way, excellent as parquet).

Among many from India are : Laurel (a rich, dark, finely-marked wood); silver greywood (ranging from brown to greyish).

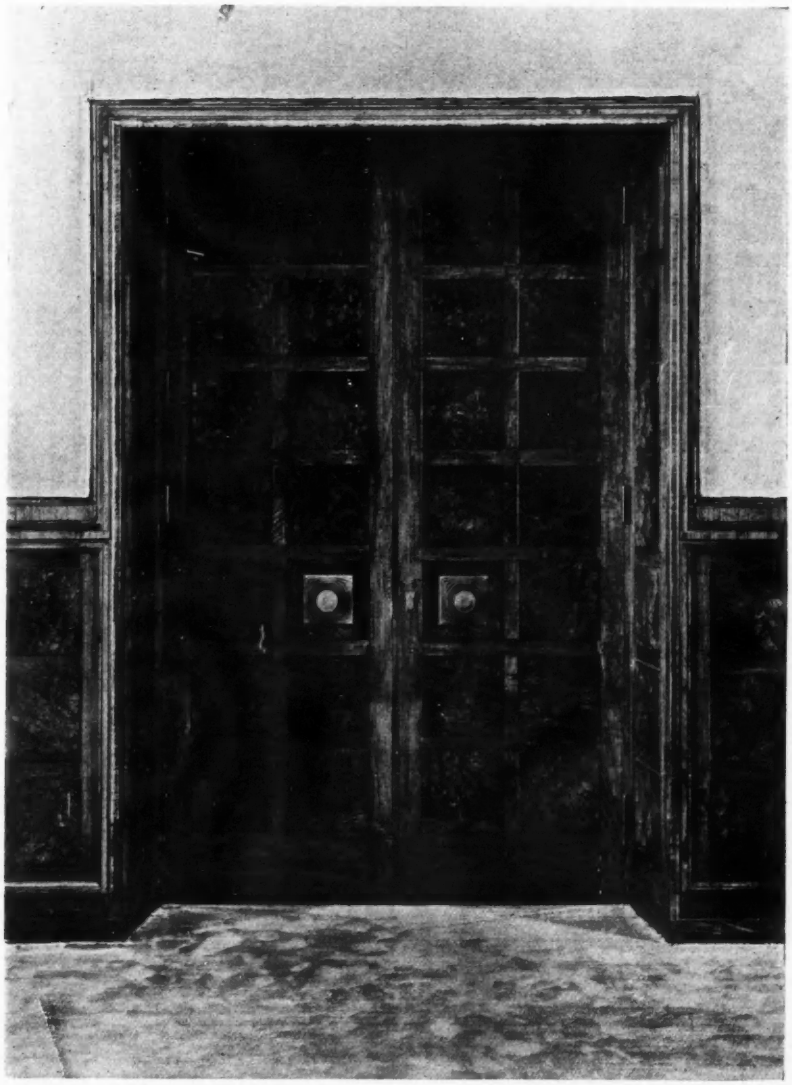
Some "fancy" veneers from foreign parts may be mentioned : Angelique (Central South America : reticulated effect, dark brown and yellow, rather like snake skin); zebrano (like its namesake the zebra—the rose variety is less slightly marked and most pleasant); marblewood (rose and grey, marked like marble); bubinga (like a paler rosewood, with "roey" marking); amboyna (golden, small mottled —a favourite with the modern French furniture maker); thuya (the burr of this wood is rather like amboyna burr, but reddish brown); malapo (a golden ripple grain). The description of many of these veneers has been taken from the admirable selection of panels shown by Messrs. Mallinson.

In the almost embarrassing variety of veneers available lies, perhaps, one of the causes why so few are in general use. But I think it is probable that in the selection of timbers for interior work most architects give preference to those which are satisfactory both as veneer and as solid wood. It is rarely possible to veneer all surfaces except in furniture. Hence the pervasion of walnut, mahogany and oak. But a little more enterprise will discover combinations of rare veneers and commoner woods that are excellent.

In a city boardroom panels veneered with burr elm have been set in a framing of walnut, and the colour is lively and harmonious. Burr and pollard oak will, of course, go with ordinary oak and provide a relief from the now rather too common walnut burr. Teak, french polished to an eggshell finish, "goes" with thuya and other of the brown veneers; and mahogany with some of the reddish ones such as bubinga or rosewood. Used in small quantities for contrast, such striking veneers as zebrano and macassar yew and holly are invaluable.

What is extremely necessary in the choice of veneers, as in other matters, is to know what you want and see that you get it. This can be done only by taking a good deal of trouble, and the best way is to select a sheet of veneer and insist that the rest should be from the same bundle. Only thus will the designer avoid the disappointment, which has come to most of us at one time or another, of finding that the figure or colour of the veneer is not what one expected.

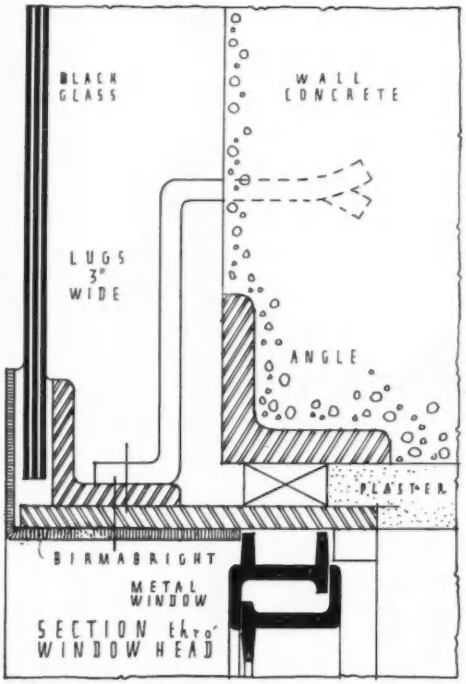
WALNUT VENEER

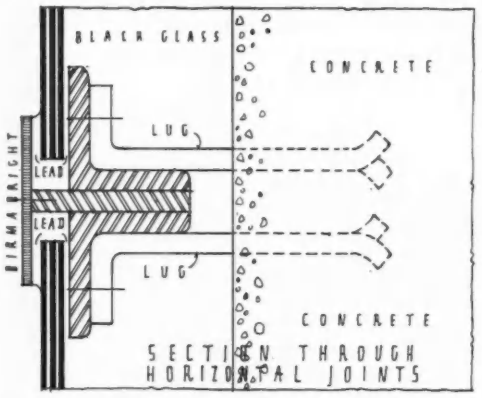


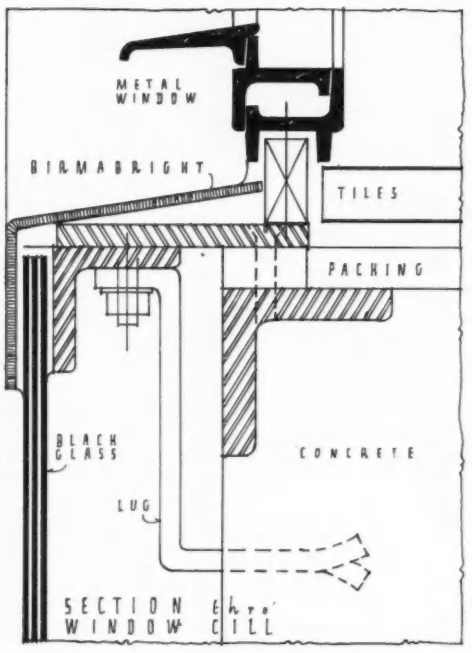
Underground Building, London.] [*Adams, Holden and Pearson, Architects.*

The entrance doors to the chairman's room are in figured walnut, the veneered panels being slightly raised.

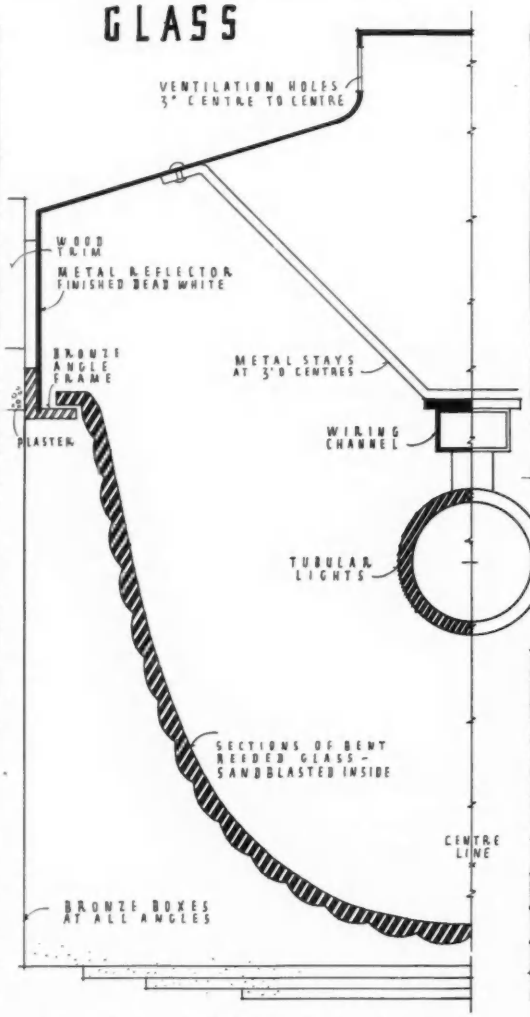
GLASS



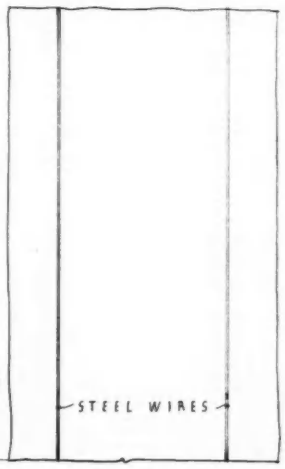




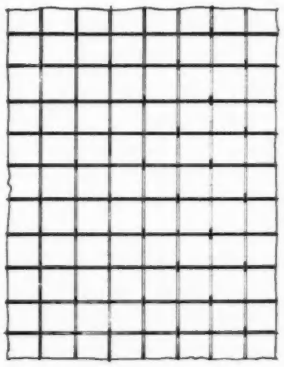
GLASS FACING OF WALL
THE DAILY EXPRESS BUILDING
ELLIS AND CLARKE, ARCHITECTS
SIR OWEN WILLIAMS, ENGINEER
HALF FULL SIZE



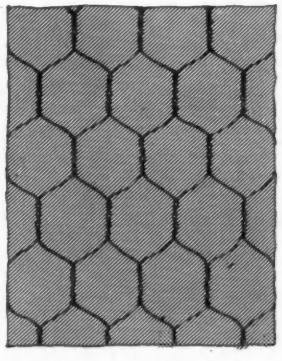
GLASS CEILING RIBS
REGENT PALACE HOTEL
OLIVER P. BERNARD, ARCHITECT
HALF FULL SIZE



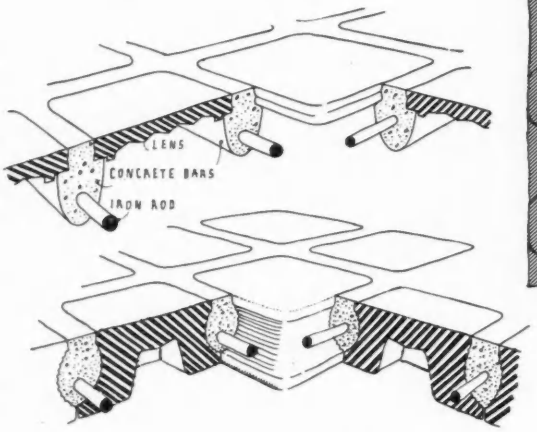
REINFORCED POLISHED PLATE GLASS (WIRETEX)



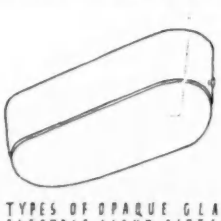
"GEORGIAN" FIRE RESISTING PLATE GLASS



ORDINARY WIRED GLASS



REINFORCED CONCRETE BARS & CAST GLASS LENSES FOR LIGHTS IN PAVEMENTS & FLAT ROOFS etc



TYPES OF OPAQUE GLASS ELECTRIC LIGHT FITTINGS FIXED DIRECT TO CEILING

[See also plate on page 599.

MODERN SYNTHETIC FACING MATERIALS

BY RAYMOND McGRATH

These notes have reference to the great variety of rigid facing sheets, slabs and tiles which are prominent in modern interior and exterior construction.

TO cover crude structural masses with a decorative or protective skin is by no means a new problem. Roman and Byzantine marble and mosaic are notable precedents. With the advent of concrete and steel construction, the need for such facing materials has been increased, and the modern architect finds before him an ever-multiplying array of synthetic materials. The properties of many of these are new or unknown. Many are in the experimental stage, and only a chemist-architect can pass adequate judgment on them.

These slab and sheet materials have exercised a very salutary influence upon architectural design. Pure decoration not being our present strong point, we are spared the repetition and extravagances of the decline of plaster enrichment and the crudities of average wood-carving. Greater emphasis is placed upon colour and surface finish. Simplicity invokes refinement and occasionally, as in the interiors of Mies van der Rohe, produces an abstract chastity which is most refreshing. The best modern designs are concerned with the idea of disposing and relating, geometrically, simple planes and spaces. The materials here described contribute largely to such designs.

The following materials may be grouped under the head of modern synthetic facing materials: (a) glass, (b) tiles, (c) cellulose and synthetic resin, (d) synthetic stone, marble, etc., (e) asbestos sheets, (f) wall-boards. Any sort of comprehensive technical description of each of these materials is far beyond the scope of these notes, which are offered for their general interest only. Data of a kind concerning the properties of the materials is readily obtained from the manufacturers, who, while some of them are not always scrupulously exact in their claims, are usually anxious to see the materials employed. One regrets that only a minority is also anxious to see the materials employed well. Too often the manufacturer's perfection complex embraces no more than the placing of the order. The scientist is sadly remote from his product. It is difficult to know what results to draw from the average literature which advertises building products. In rare cases manufacturers issue well-organized specifications, but genuine technical data is usually obtained at the pistol point, it being imagined that a splendid secrecy secures the faith of the lambs. My files are full of a most amazing quantity of blurb inspired by such misguided convictions. Consequently, the collection of practical data becomes the work of a lifetime, and if you want exact information the safest course is to visit the works.

Most of us are now fairly familiar with the use of glass as a wall lining. The coloured opaque varieties, polished only on one side, are manufactured for this purpose. The method of fixing varies considerably, and is of prime importance, taking into consideration the nature of the wall and the weight and size of the sheets. In London there are now a number of examples of walls faced externally with glass, and a building is under construction the entire exterior of which is to be faced with black polished plate.

Opaque coloured sheets were first manufactured on the Continent, but are now being made in England. Glassmaking, indeed, is by no means atrophied in this country. We have produced the finest reinforced glass, and valuable work has been done in the production of toughened, fire-resisting and other glass. In Germany very interesting developments have been made with structural glass bricks and tiles for walling, and in France this, with a touch of "fantaisie," has produced systems of decorative moulded glass panelling.

There is an urgent need for well-ordered technical information about glass, as well as about the other materials which I refer to. A manual should be produced, under the auspices of the glass manufacturers, containing a complete list of types of glass, photographs of them, sizes of sheets, thicknesses, weights and general information. A section of the manual should be devoted to (1) processes of manufacture; (2) technical descriptions of silvering, flashing, aciding and sandblasting; (3) glass-bending, giving diagrams of types of possible bends and the limitations of the process; (4) glass casting, giving general data as to sizes, shapes and types of moulds. A manual of this kind would be invaluable.

Entrance hall, decorated with tiles and strips of concrete; the floor is also of tiles. The ceiling and the door surround are formed of concrete.

TILES

[*Labour Exchange, Nuremberg. Otto Schweizer, Architect.*]

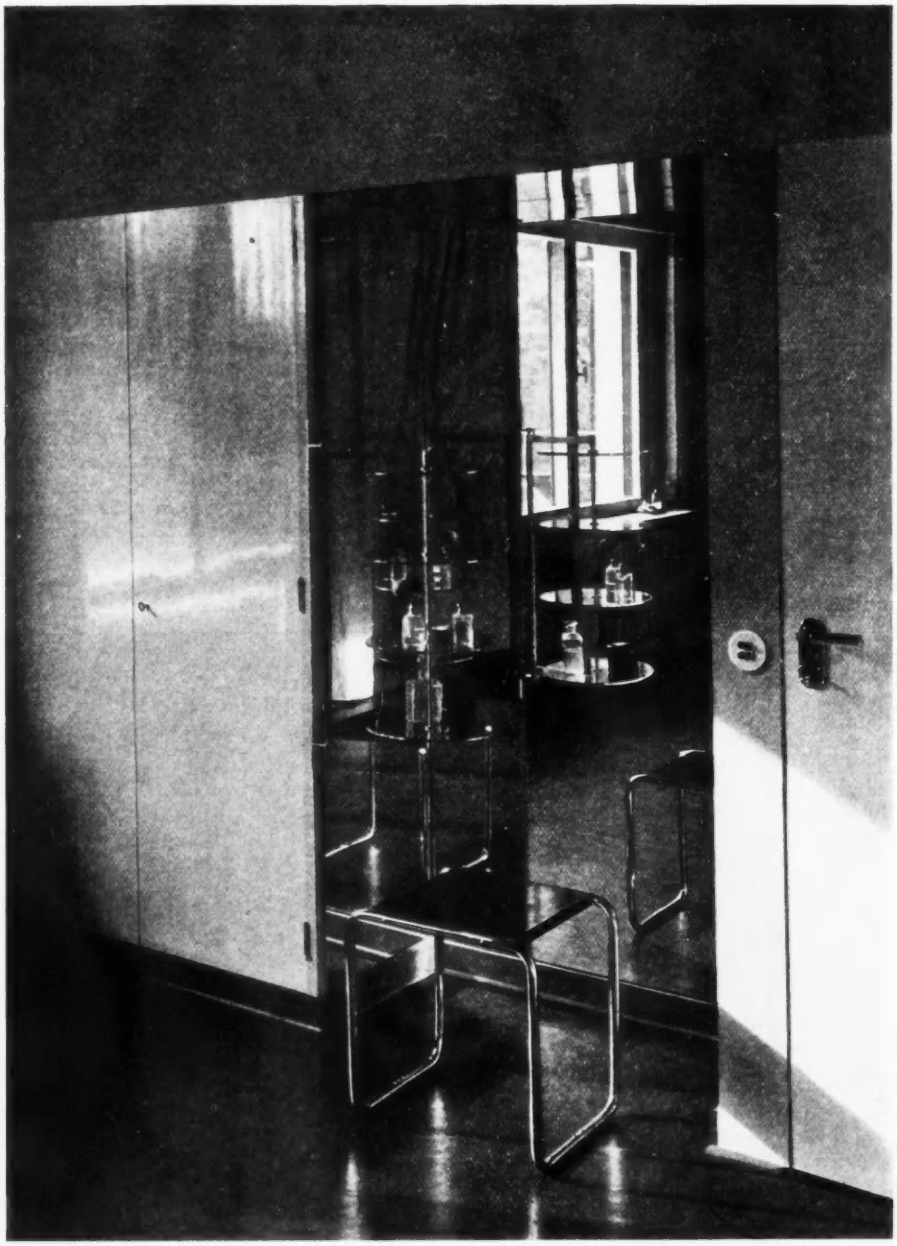
Two products are of interest in relation to walls before leaving the subject of glass—glass mosaic and glass silk. Where expense permits, glass mosaic still has tremendous architectural possibilities, and there are many evidences abroad that the medium has not been overlooked.

Glass silk consists of long fine threads or fibres of glass, which are very flexible and can be made up into various forms suitable for use as heat-insulators. The interesting feature of glass silk is that it is not affected by any degree of cold and withstands temperatures up to 900° F. without disintegration.

The subject of tiles (glazed or otherwise) and terra-cotta is a vast one. In this country considerable attention has been paid to the manufacture of tiles, and their possibilities and properties are familiar to all architects. Terra-cotta has received very much less attention, and is unfortunately associated with a period of architectural wickedness and decadence. The possibilities of the material, particularly in the London atmosphere, should be great; but the disadvantages of shrinkage in the manufacture of the material is a factor requiring serious consideration.

A determined search must be made for some slab material which will be an inexpensive, attractive and permanent facing for the exteriors of buildings. The problem has been seriously considered in the National Radiator Building, the Dorchester Hotel, and the new *Daily Express* building in Fleet Street. The Dorchester Hotel has been

GLASS AND PLYWOOD



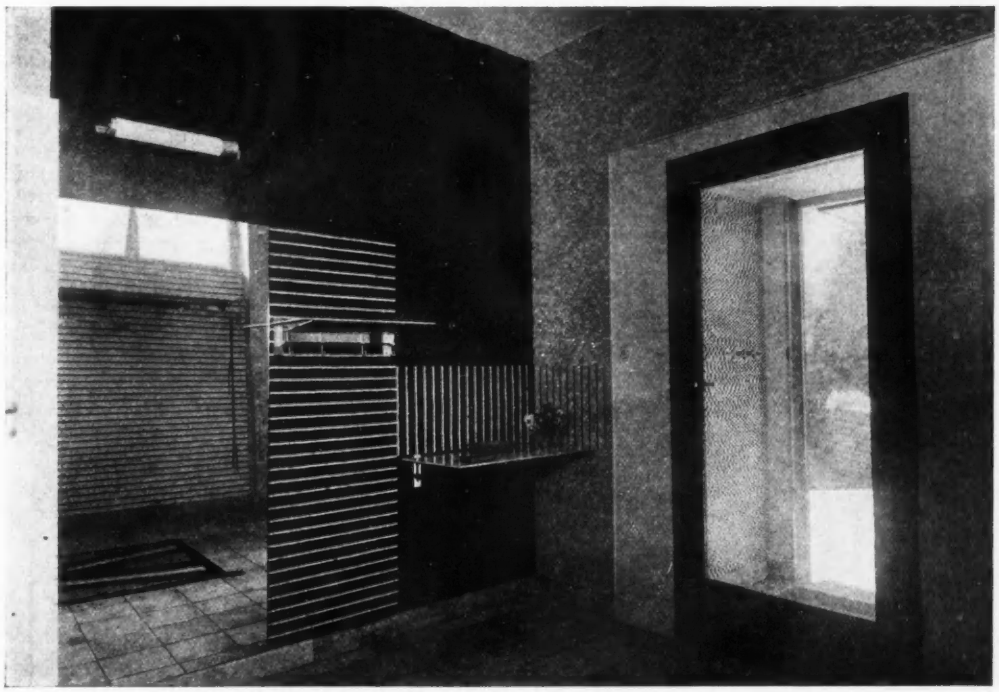
House at Dessau.] [*Walter Gropius, Architect.* [*By courtesy of Albert Langen Verlag, Munich.*

Guest-room toilet recess, lined with glass and finished with plywood.

GLASS MOSAIC

House near Berlin. Marcel Breuer, Architect.]

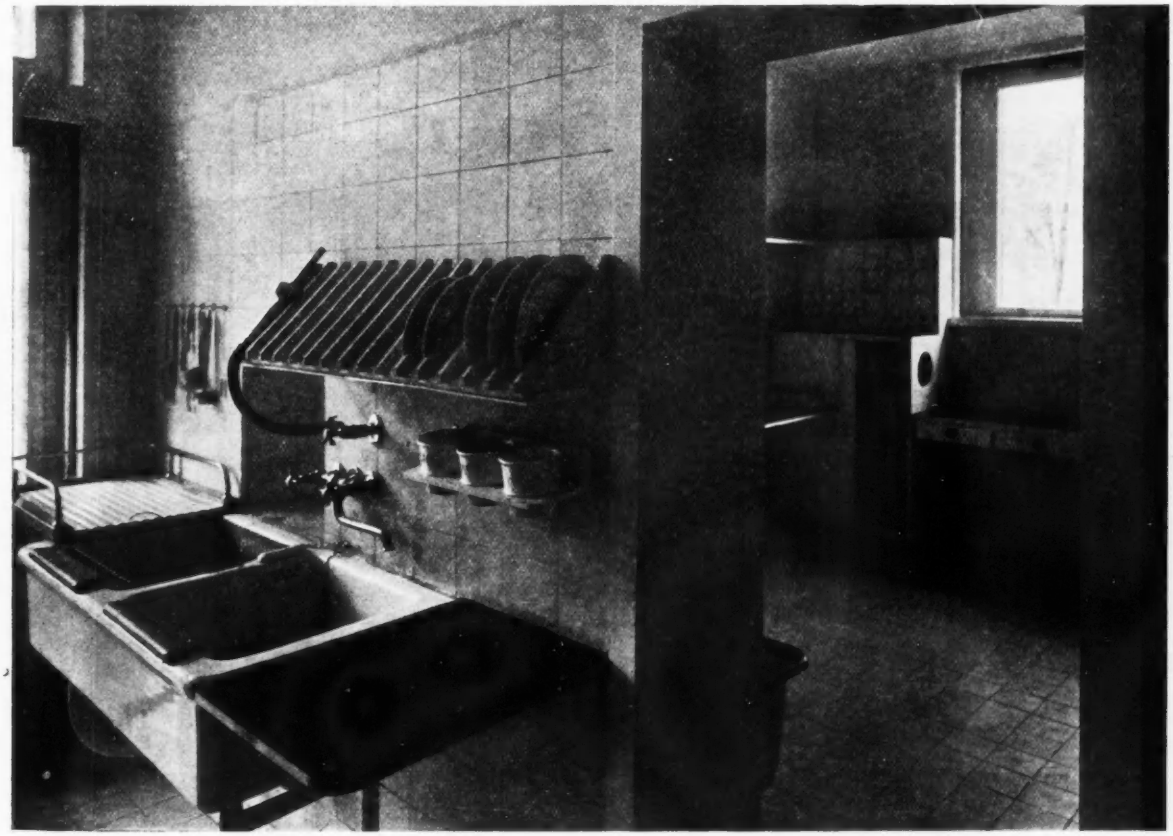
From Die Form, *by courtesy of Verlag Hermann Reckendorf, Berlin.*]



By courtesy of Albert Langen Verlag, Munich.]

Entrance hall of a country house decorated with glass mosaic, and fitted with clothes hangers and table.

TILES



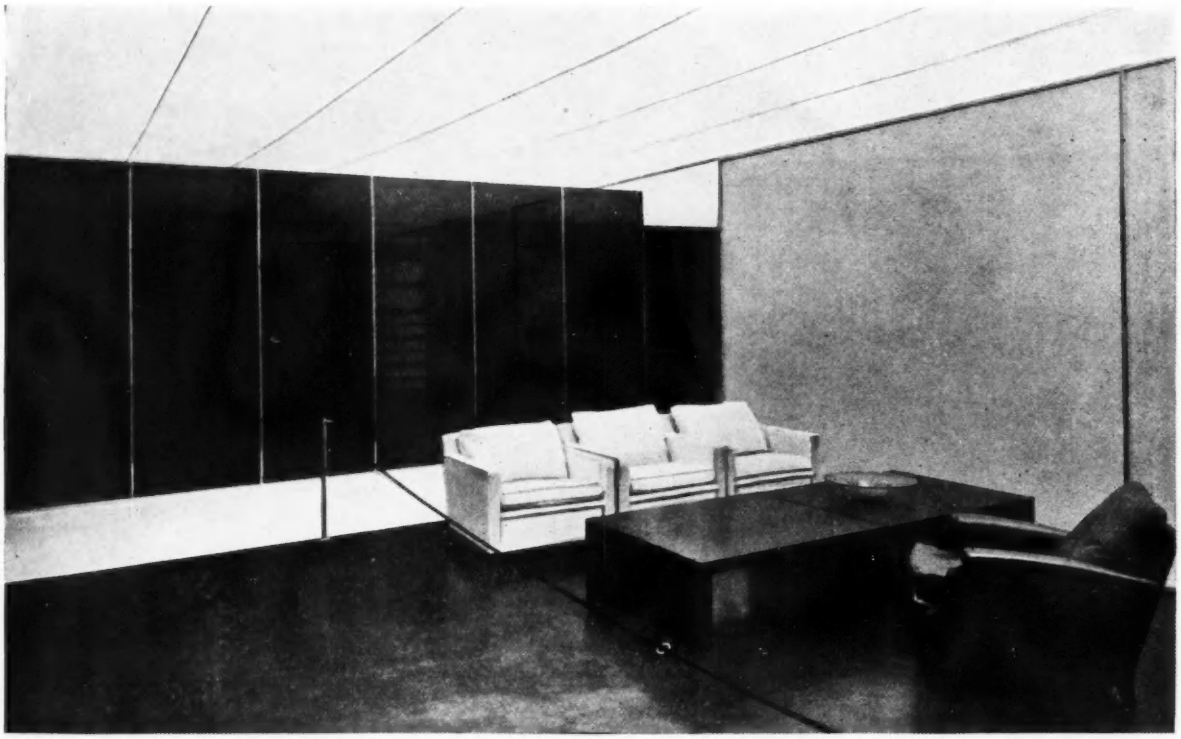
House at Dessau.] [*Walter Gropius, Architect.*

Tiled scullery, with fitted sink. The wall of the scullery is of tiles, and the floors of both this and the kitchen, of which a glimpse is seen, are of the same material.

very successfully slabbed with panels of pre-cast terrazzo, the behaviour of which over a long period of years will be most instructive. Other pre-cast slabs of a marbled or granitic appearance have been developed, and one particular variety, which is cast on a bed of polished plate and hardens on exposure to the atmosphere, has been successfully used for the façades of the chain of Nicolas shops in Paris.

At the Paris Exposition de la Société des Artistes Décorateurs in 1930, I saw one of the first successful uses of cellulose acetate wall-sheets. This was in the German pavilion designed by the architect, Walter Gropius. The

GLASS AND WALL-BOARD



From Glas im Bau, *by courtesy of Ernst Pollak Verlag, Berlin.*] [*Mies van der Rohe, Architect.*

An interior of plate-glass and wall-board at the Stuttgart exhibition of plate-glass.

possibilities were obvious at once. The material is manufactured in sheets, 57 ins. by 25 ins. approximately, and the thickness ranges from 2 to 4 mm. It is made with a matt or polished surface, or with various cube or other surface designs.

These wall-sheets may be employed as inset panels. In the case of the Gropius interiors, the sheets, cemented to a building board base, were butted, allowance being made for expansion and contraction. The interesting point about this material is that it can be manufactured in a complete range of bright clear colours, or in the most delicate pastel shades.

It is not brittle like glass, has great elasticity, and broken sheets can in any case be permanently repaired by damping the broken edges with acetone. Furthermore, the material can be planed with an ordinary wood plane. Scratches, either on matt or polished sheets, are readily removed, and the sheets may be permanently bent by warming to a temperature of 85° F. and allowing to cool.

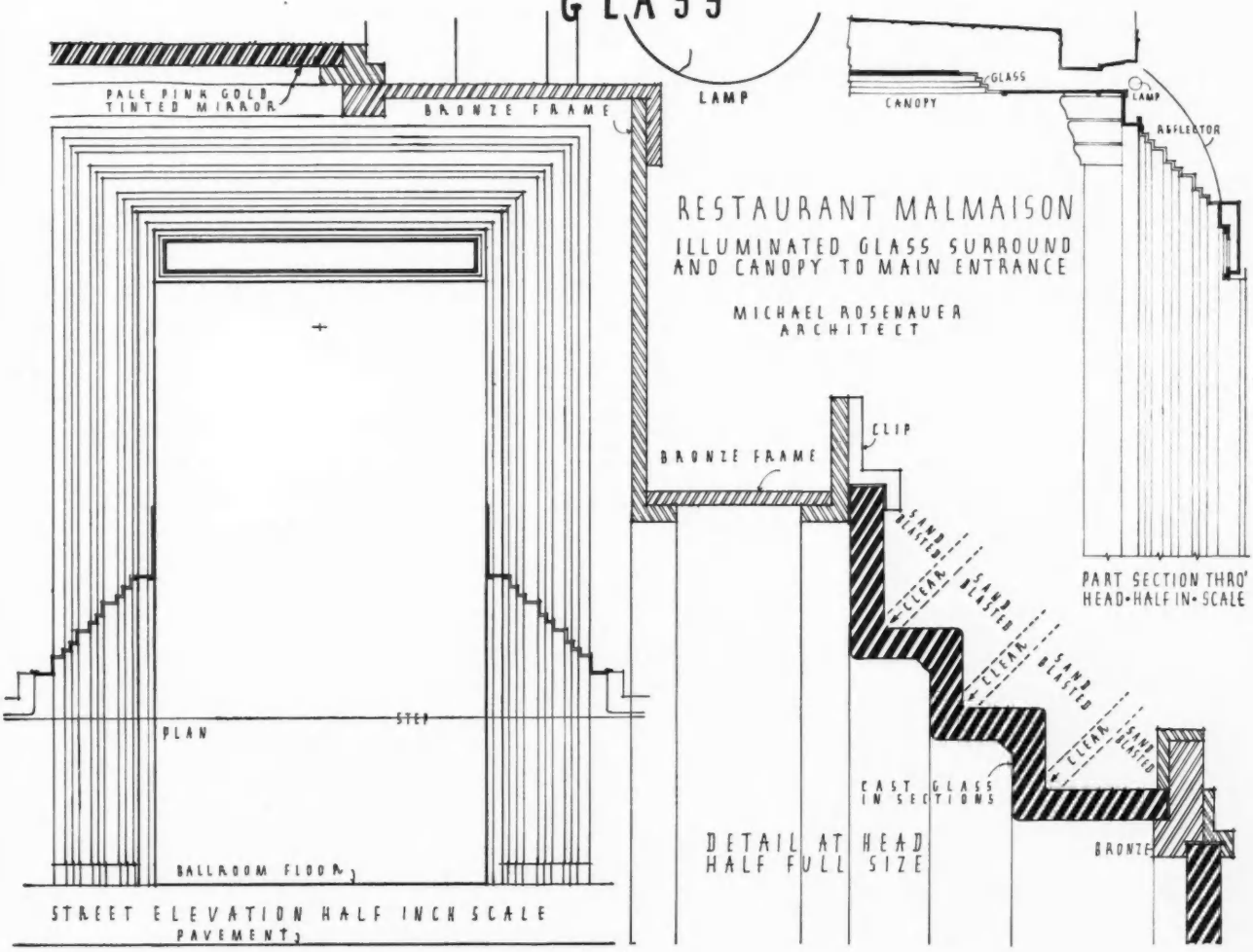
The sheets used for the 1930 Exhibition were intended for interior use only; but sheets suitable for exterior use have since been manufactured, but not so far employed in England.

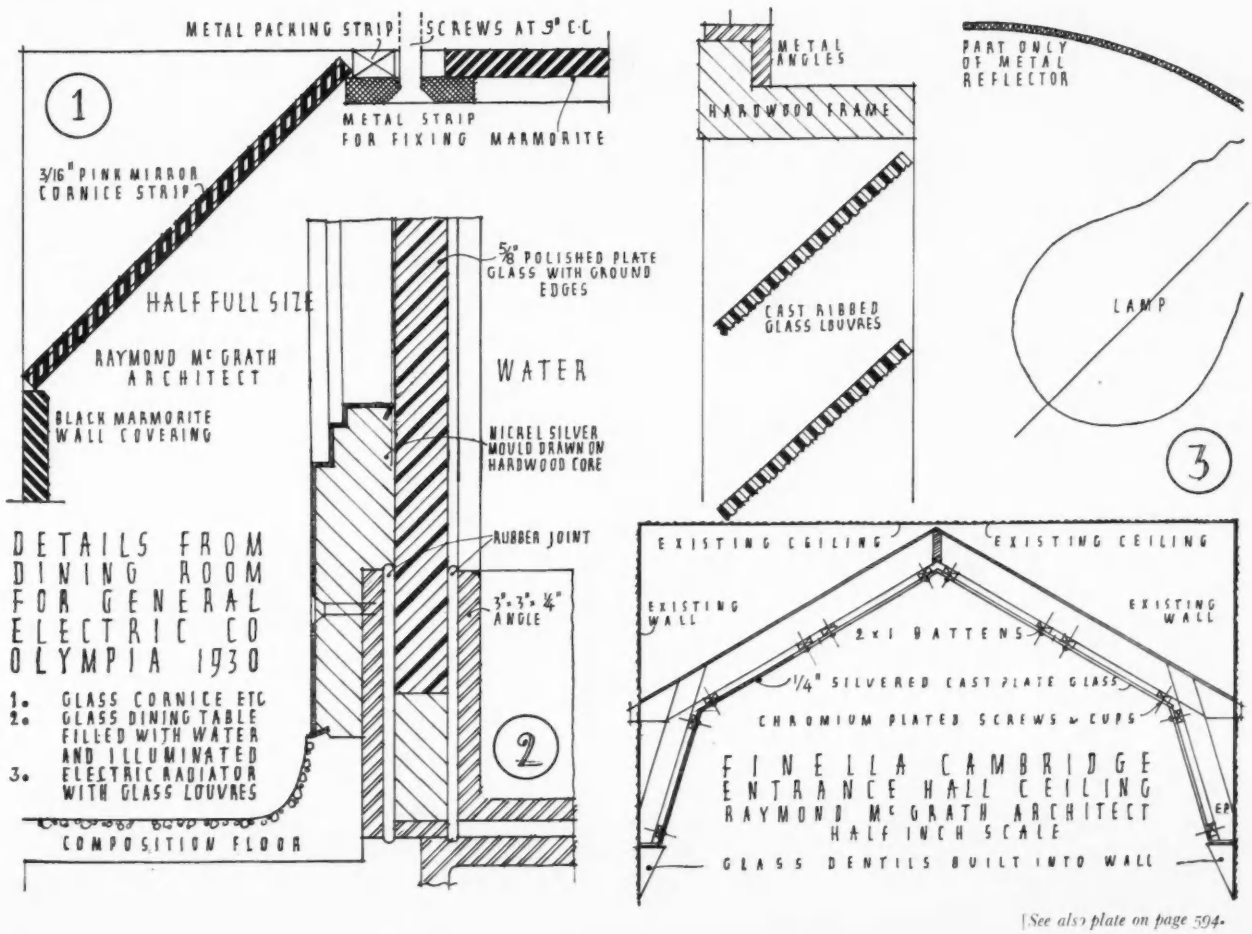
In addition to cellulose acetate, casein and synthetic resins are manufactured in sheet form. The sizes of sheets available vary according to the process of manufacture. Casein is hygroscopic, and therefore liable to shrink and warp. It is not suitable for wall panelling, though it might be employed to advantage in small articles of furniture. Synthetic resin of the phenol-formaldehyde type, however, manufactured in laminated form, has great possibilities for wall-panelling. As usually manufactured, this material is pale amber in colour, but surface or solid colours are obtainable. The maximum size for sheets of this material is 40 ins. by 34 ins. approx. Laminated resin sheets may be mounted on ply or on wall-board. Interesting experiments have also been made with mounting on asbestos sheets. Asbestos sheet is also the base for other forms of surface veneer and decoration.

Finally, wall-boards, either as a substitute or base for plaster, are employed from considerations of damp resistance, sound absorption, heat insulation, or lightness of structure. A great many varieties are available, and raw materials of different kinds are employed. Numerous boards are made from waste timber, exploded or ground into a moss-like fibre and subsequently compressed; sugar-cane fibres are felted and compressed; and boards are also made from sterilized fibres of licorice root.

Many other miscellaneous lining materials might be noted, slate-slab products and rubber and asbestos compositions. The choice of material to be used depends entirely upon the desired qualities and the exigencies of the particular case.

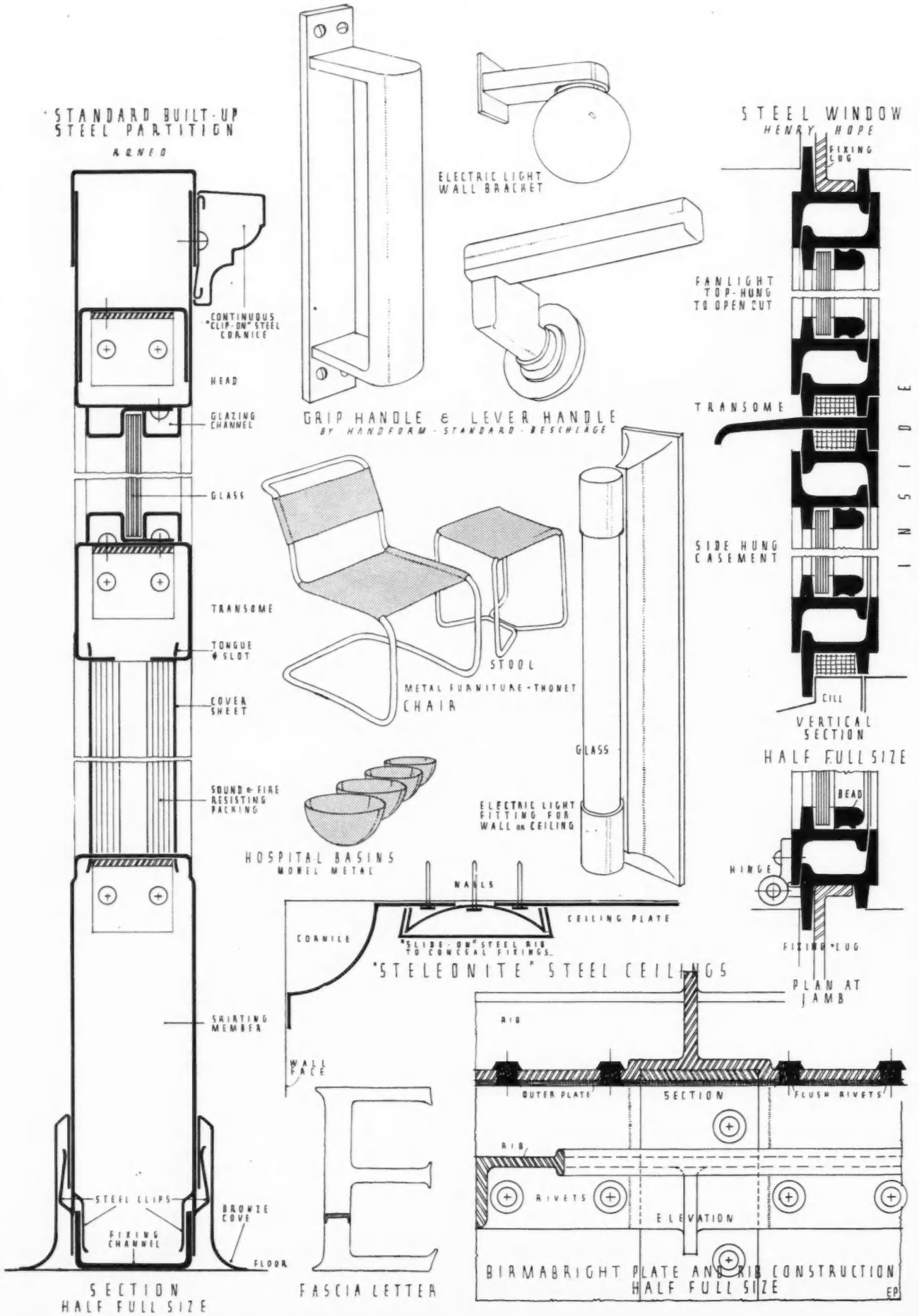
GLASS





[See also plate on page 594.

METAL


STANDARD BUILT-UP STEEL PARTITION
ARNEO
CONTINUOUS "CLIP-ON" STEEL CORNICE
HEAD
GLAZING CHANNEL
GLASS
TRANSOME
TONGUE & SLOT
COVER SHEET
SOUND & FIRE RESISTING PACKING
SKIRTING MEMBER
STEEL CLIPS
BRONZE COVE
FIXING CHANNEL
FLOOR
SECTION
HALF FULL SIZE
ELECTRIC LIGHT WALL BRACKET
GRIP HANDLE & LEVER HANDLE
BY HANDFORM - STANDARD - BESCHLAGE
STOOL
METAL FURNITURE - THONET
CHAIR
HOSPITAL BASINS
MONEL METAL
GLASS
ELECTRIC LIGHT FITTING FOR WALL OR CEILING
NAILS
CEILING PLATE
CORNICE
"SLIDE-ON" STEEL RIB TO CONCEAL FIXINGS
"STELEONITE" STEEL CEILINGS
WALL FACE
FASCIA LETTER
STEEL WINDOW
HENRY HOPE
FIXING LUG
FANLIGHT TOP-HUNG TO OPEN OUT
TRANSOME
SIDE HUNG CASEMENT
INSIDE
CILL
VERTICAL SECTION
HALF FULL SIZE
BEAD
HINGE
FIXING LUG
PLAN AT JAMB
RIB
OUTER PLATE
SECTION
FLUSH RIVETS
RIB
RIVETS
ELEVATION
BIRMABRIGHT PLATE AND RIB CONSTRUCTION
HALF FULL SIZE
EP

THE NEW METALS

BY ALEXANDER H. HAYES

Metallurgy contributes to two distinct phases of architecture, construction and decoration, and recent years have witnessed considerable developments in each. Utilitarian equipment also tends to employ metals to an increasing extent. On the whole, however, the constructional applications of metals have undergone no outstanding changes comparable with those in the uses of metals for decorative purposes. Some recent applications of metals in architecture are dealt with in the following notes.

METALS IN CONSTRUCTION

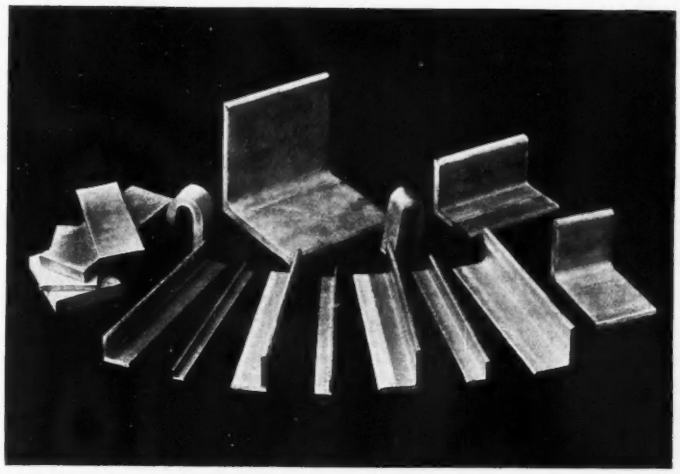
WITH the standardization of steel sections and specifications for composition and physical properties, progress in steel skeleton construction has been relatively rapid. In general, this progress has taken the direction of wider use rather than changes in the character of the material. The determining factor in deciding the class of material for purely constructional or stress-bearing purposes is cost relative to properties, and most metals other than iron and steel become prohibitive, except for special purposes, when their cost is compared with that of rolled or cast steel.

Aluminium and its alloys have found wide industrial uses during recent years, and claims for aluminium as a structural material have often been made. Despite the undoubted value of aluminium in engineering, on account of its lightness and high strength, the field in architecture is very limited. Perhaps the most spectacular development in aluminium is the well-known alloy Duralumin, which is little heavier than the pure metal and, weight for weight, has a breaking strength about three times that of mild steel. This combination of lightness and strength discounts the high cost for such uses as aircraft construction, automobile parts and the like, but for architectural uses the advantage has no considerable value. The weight of any structural member, relative to its load in a building, is small, and the factor of safety demanded in order to meet contingent stresses is so high that in all but very exceptional circumstances lightness is of less importance than cost.

The capacity of a material to resist corrosion is not so easily discounted, for corrosion is the *bête noire* of the constructor. Many attempts have been made to prevent the corrosion of iron and steel, but in the case of structural steel these have usually resolved themselves into methods of protection, as by paints or coatings of material to exclude air and moisture. The introduction of corrosion-resisting or stainless steels, however, has opened up new possibilities in dealing with this problem, and the development of Staybrite steel by the pioneers in the work, Messrs. Thos. Firth and Sons, Ltd., has brought this modern contribution of the metallurgical art within the scope of the architect.

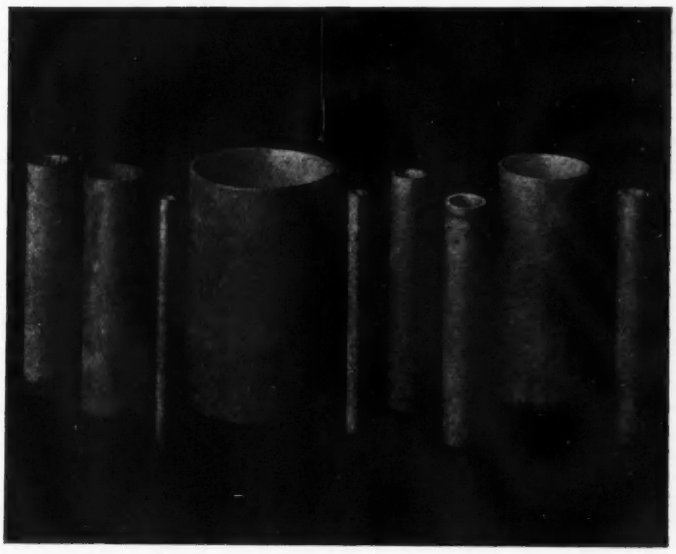
While Staybrite cannot yet be classed as a general structural steel, it has corrosion-resisting properties, malleability and ductility that make it highly valuable in special applications. It has been found a very efficient material in the restoration of ancient buildings, cathedrals and the like, where its special properties justified its cost. As an example may be mentioned the preservation work on St. Paul's Cathedral, in which Staybrite steel bars were used for reinforcing the bases of the eight piers which support the dome. Rods of the same material were also used for tying up the inner wall of the dome to the outer wall.

This introduces one application for stainless steel which justifies close attention. The metal rods in reinforced concrete may be considered as being normally protected from air and water, being completely covered with a coating of cement. In practice, however, where tension exists, hair cracks tend to develop in the concrete covering of the steel rods, and when the structure is exposed to wet a danger of moisture gaining access to the metal exists. Also, all masonry is permeable to moisture to



Bars, angles and U-sections of Firth's Staybrite, having both structural and decorative applications.

STAINLESS STEEL STRUCTURAL SECTIONS



Not only rods but tubes of Firth's Staybrite are available in numerous sizes. The metal has advantages for reinforced concrete construction in certain circumstances.

For decorative purposes non-rusting steel has obvious recommendations.

STAINLESS STEEL

This panel for a grille is an interesting example of its adaptability.

some extent, and rods inserted to reinforce old masonry may be accessible to moisture, despite the cement grouting.

Where the nature of the structure justifies the extra cost, the use of corrosion-resisting steels for reinforcement is desirable. The adhesion between the steel and the concrete, which ordinary steel allows, is not so readily obtainable with Staybrite steel, on account of its non-corroding surface. This difficulty, however, is overcome by using various types of deformed bars, as, for example, a special swaged section of alternating ovals and indents. Tests in connection with the work at St. Paul's Cathedral showed that this has the effect of increasing by more than six times the resistance to movement in the concrete. This type of deformation also appears to distribute well any movement stresses in the concrete, instead of giving local crushing stresses. The yield strength of this steel in the fully softened condition is about 17 tons per square inch, giving a working stress of at least 14,000 lb. per square inch. This compares with 16,000 lb. allowed for ordinary mild steel rods. In the higher tensile condition the working stress of Staybrite steel is 50 per cent. higher.

UTILITARIAN METALS

Under this heading may be considered metals used for fittings and equipment that are not necessarily ornamental, such as service pipes, kitchen equipment, baths, lavatory and hospital appliances, and the numerous other purposes where either the strength or hygienic value of metals is important. In many cases utility is combined with decorative effect by the use of metals in such applications.

Recent contributions worthy of attention are the ternary alloys of lead-cadmium-antimony and lead-cadmium-tin, on which considerable research work has been done recently. The intercrystalline cracking of lead through vibration is often troublesome and the addition of very small amounts of the metals named serves as a preventive. The alloys recommended by the British Non-ferrous Metals Research Association are :

1 : Lead 99·25 per cent., cadmium 0·25 per cent., antimony 0·5 per cent.

2 : Lead 98·25 per cent., cadmium 0·25 per cent., tin 1·5 per cent.

The properties of these render them particularly suitable for such uses as glazing bar sheathings, roofing sheets, guttering and probably also for domestic water service pipes. The addition, it is claimed, does not appreciably affect the workability or corrosion-resistance of the lead. Ordinary lead pipe frequently contains other impurities, such as antimony and copper, also tin, totalling about as much as the hardening elements in the alloys in question. The ultimate strength of the alloys is increased to 1·68 and 1·69 tons per square inch, compared with 1·05 for pure lead. They have found ready application in the electrical industry for cable sheathing and should be equally valuable in plumbing work, as their working properties are excellent. The cost is somewhat higher than lead, being about 4 per cent. more for alloy (1), and about 17 per cent. more for alloy (2). The latter, it should be mentioned, is definitely more resistant to alkaline corrosion, and both alloys are slightly better than lead in regard to acid corrosion.

Solid-drawn copper tubes for water and gas, in place of lead and iron, have certain advantages, particularly in regard to their smaller external diameter. The unions necessary, however, tend to be bulky, and the tubes are liable to be stressed when bent with small radii. In general, however, copper tubes can be considered definitely competitive with lead and iron, and as water conduits they appear to resist destruction by water freezing as effectively as lead.

An addition to the roofing-sheet metals which should be noted is the natural nickel-copper alloy known as Monel metal. This is highly resistant to corrosion and has the strength of steel. Its composition is approximately 67 per cent. nickel, 28 per cent. copper and 5 per cent. of other metals, but it contains no tin, zinc or antimony. In appearance it is similar to pure nickel and takes the same high finish, but is slightly softer in tone and more silvery. Since it is as ductile as steel it can be fabricated by rolling, drawing, forging or casting. Its utilitarian applications include culinary and catering appliances and hospital equipment, such as operating tables, shelves, table tops, sinks, draining boards and cupboards. Like nickel and bronze, it combines utility with ornamentation in fire-grates, kerbs, finger plates and numerous other interior fittings. Pure nickel has a distinct value for fittings where corrosive action has to be withstood and for such purposes as dairy equipment.

Similarly, stainless steel has many useful domestic applications, including kitchen equipment, fireplaces, radiators and electric heaters. In some of these, nickel and chromium plating also have become established in place of brass.

Aluminium alloys find application as stair nosings, mouldings, cases for electric lighting wires and the like, and a variety of rolled sections are available for various uses.

METALS IN DECORATION

In this category may be classed metals used in architectural constructions which do not bear stresses. Admittedly, strength is, in a degree, a requirement of many parts which serve primarily for the production of decorative or artistic effects. These, however, are distinct from applications where structural considerations come first.

Decorative effects in metal have seen many varying phases during the last decade or two. The brilliancy and warmth associated with brass gave that alloy a prolonged vogue, and its ease of manipulation led to elaborations and intricacies of decorative design which, by their very intricacy, spelled their own doom. The rapid tarnishing of

polished brass faces renders brass an unsuitable metal for other than readily accessible fittings which are not exposed to the outside atmosphere. The trouble of tarnishing gave rise to a multitude of processes for colouring and lacquering, and while these have a certain utility, the impermanence of such surfaces when subjected to regular cleaning renders them unsuitable for external use.

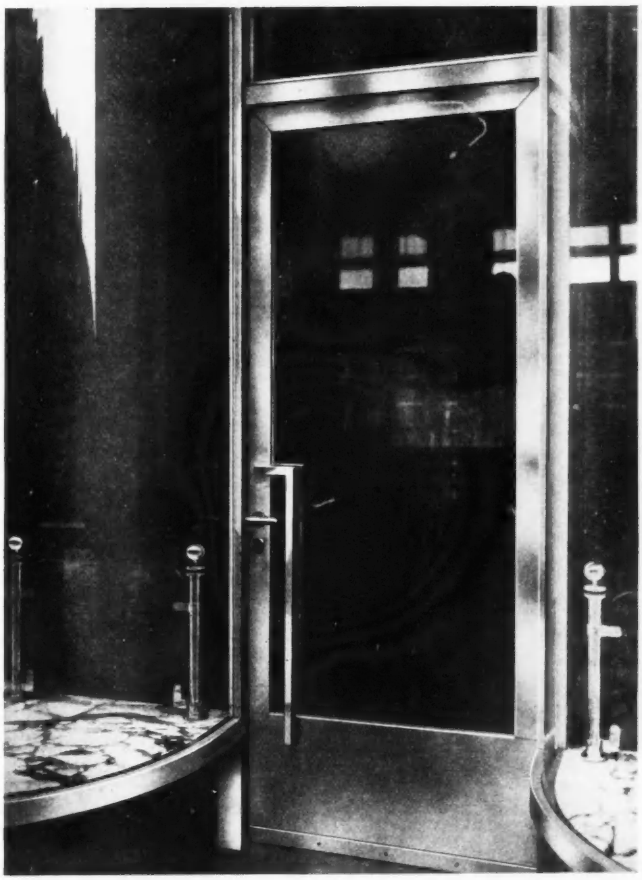
Electro-plating of brass and iron was the next development, and there is still a wide field for nickel and chromium plating for outdoor use. For internal use plating is still widely employed for producing surfaces of nickel, chromium, silver and oxidized silver and dull gilt.

The early limitations of brass and electro-plated metals turned attention to aluminium and its alloys, and extravagant possibilities were promised. Despite, however, the soft, pleasing effect of a matt aluminium surface and the brilliancy of the newly polished surface, the natural discoloration by oxidation and the difficulty of keeping the surfaces clean limits the uses of aluminium. It is unsuitable for fittings or parts in interiors which are subject to handling, as the surface rapidly becomes oxidized and dirty. Also, for exterior work, it is unsuitable where constant cleaning is required. It has, however, a field in external as well as internal decoration. It does not corrode like iron, for the patina of oxide which forms on the surface acts as a protective skin, though it continues to darken in colour. This oxide, however, is relatively soft and does not resist handling or rubbing.

Some of the aluminium alloys, as, for example, with 10 per cent. and upwards of silicon, have a distinct resistance to corrosion by sea water and find considerable use on board ship. A new aluminium-silicon, which has been recently introduced by the Metropolitan-Vickers Electrical Company, combines high resistance to corrosion with excellent working properties. Its ultimate strength is 9 to 11 tons per square inch when sand-cast and higher when chill-cast. It is notably ductile when cold, and has a close, silky texture and can be rolled into sheets, drawn, pressed and stamped.

The various aluminium alloys in sheet form, with bright, frosted, satin and mirror finishes, obtainable in sheets up to 12 ft. by 4 ft., and in coils in the thinner gauges, are effective for use as panelling and for large plain surfaces.

Polished aluminium for internal uses may be cleaned at intervals to keep up its appearance by using an ordinary liquid, non-gritty metal polish. Normally, it should be washed with clean water, dried with a chamois leather and polished with a dry cloth. Wherever aluminium is used decoratively, it should be remembered that while the frosted finish, as also the sand-blast finish, may be most effective when new, the gradual darkening by oxidation prevents the original decorative effect being maintained, and ordinary cleaning processes destroy the matt surface. In some applications, however, this darkening is not objectionable. Also, it is much less pronounced in some aluminium alloys than others.

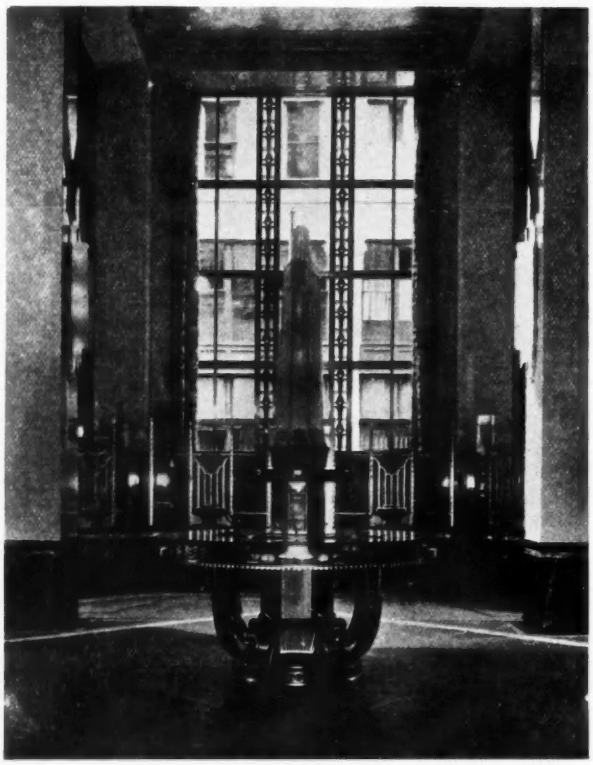


Aluminium soon becomes dulled on exposure to weather, but certain of its alloys resist corrosion and tarnishing, as shown in the case of this door. BIRMABRIGHT

The alloy known as Birmabright, which has mechanical properties very close to those of the ordinary aluminium alloys, is said to preserve its surface under internal conditions for several months, with only a slight dimming, and, even under conditions of considerable humidity, is readily rubbed bright. Under external conditions it takes on the dull patina associated with aluminium, but to a lesser degree, and anodic oxidation treatment for decorative purposes produces a tenacious protective film which can, if required, be dyed to produce fast colour effects for internal work. Birmabright is essentially an alloy of aluminium with magnesium (3.5 per cent.) and manganese (0.5 per cent.) It finds application as door and window fittings, balustrades and grilles, casements, shop fittings and similar equipment.

In the important external decorative field of shop-fitting, metals are finding a very much wider use, but the vogue is distinctly for plain, simple effects, clean surfaces and absence of intricacy. Decorative effects in shopfronts find their expression today chiefly in three mediums: the alloy known as bronze metal, which gives a rich, warm bronze effect and retains its colour throughout; nickel and Monel metal (also nickel and chromium plating on brass, steel or other base); and stainless steel. Plain running members for the windows and fronts of buildings are usually composed of sheet metal of suitable gauge drawn on to a hardwood base. Non-running members, such as caps, bases and plinths of columns, may be cast or wrought.

The malleability of pure nickel, combined with its fine lustre, renders it a very effective metal for decorative purposes. Probably more interesting to the architect is the nickel-copper alloy, Monel metal, the silvery lustre of which is, if anything, more pleasing than that of nickel. Monel metal has



Integrity Trust Co.'s Building, Philadelphia.] [*Paul P. Cret, Architect.*

The check desk in the banking hall is of bronze and Monel metal. The top and the light are of etched glass.

MONEL METAL

found a definite place in architecture and has been used with excellent effect for entrances, bank screens, elevator doors, counters, shopfronts and ornamental metalwork. It can be cast, or its malleability allows it to be worked, rolled, drawn or hand beaten, and it lends itself to various finishes. With a dull finish it can be very effective as a background to other ornamentation. Since it is non-rusting and non-corroding it is not difficult to keep bright and can be cleaned by soap and water.

Like nickel, Monel metal, bronze metal, nickel and chromium-plated sheets, stainless steel also is obtainable in a variety of sections drawn on to wood and presents the appearance of solid metal bars, mouldings, etc. By this means are obtained surfaces which, unlike the skin effects produced by lacquering and colouring, are permanent and will withstand regular cleaning. Some admirable exterior decorative effects have been produced by the use of combinations of dull or matt aluminium and bright stainless steel, both in solid, sheet and moulded on wood cores. The surfaces of the stainless steel, although initially bright, are naturally subject to a certain amount of dirt deposit from town atmospheres. Frequent washing and wiping is necessary to maintain the æsthetic effect of the bright metal, and the design should therefore avoid unnecessary detail, pockets, angles and fine corrugations. Cleaning is best done with a little soap and warm water, followed by polishing with a dry soft cloth or leather. Coarse fabrics, grit and metal polish should not be used.

Stainless steel has been used externally with notable decorative effect in some well-known buildings, such as the entrance to the Savoy Hotel, London. It is also effective in the construction of ornamental gates, lift gates and grilles, turnstile doors, counters and showcases, while other artistic applications are ornamental panels and signs. In general the effect of this material, though somewhat cold for internal domestic use, except as door and window fittings, is excellent in public buildings.

When used internally in showrooms, halls and public rooms, the clean effect produced by a combination of dull aluminium sheets and bright nickel, chromium or stainless steel can be most pleasing. The soft grey matt of aluminium for large surfaces is enhanced by frames, lettering and restrained ornamentation in the brighter metal. All parts subject to handling or liable to abrasion should be of polished metal, for once damaged the matt surface of the aluminium cannot be effectively repaired *in situ*.

A new metal introduced by the Birmingham Guild, Ltd., under the name of Silveroid, has an attractive silver colour and is malleable enough to be worked like iron into forms of great delicacy. It is strong and resistant to atmospheric tarnish and corrosion, and is suitable for all forms of metalwork hitherto made in iron or bronze.

Staybrite steel and the nickel alloys must not be considered as excluding colour effects in decoration. Vitreous enamel decoration in conjunction with it, as produced by the Birmingham Guild, Ltd., allows remarkably fine effects to be attained, that are permanent, proof against rain and weather, acid-laden atmospheres, sunshine or fog. The same treatment with vitreous enamel enrichments has a wide scope in internal decoration. Similarly, combinations of bronze and enamel can have distinctive beauty and value in creating the impression of warmth and richness.

A feature of the use of vitreous enamel with metals which is worthy of note is the possibility of expressing in flat treatment the values of light and shade of which relief work is capable. Naturally a fine artistic discretion is requisite if the combination is to give its best value æsthetically and practically. For curved surfaces and surfaces in relief, enamel is not a suitable medium and should not be used.

In connection with the use of sheet metal for both exterior and interior work, as panels and for decorative effects, mention should be made of metal-faced plywood or Plymax, which is now obtainable with a permanent face on one or both sides, formed of almost any sheet metal such as bronze, aluminium, Monel metal, nickel steel and galvanized steel, finished variously. The metal faces are thin and in some cases little more than a foil, and the sheets can be cut and worked as ordinary plywood. If required, the metal can be turned into the edges to give an edge finish. Where subject to weather or moisture the edges should be turned and sealed, even when rebated into frames. This material is particularly suitable for the construction of panels, door facings or other large, plain surfaces, where ordinary sheet metal would be difficult to fix, even when backed, without springing and buckling. It has been used for the panels of dressing-boxes of baths, lavatory partitions, kiosks, cupboards, all forms of interior panels for decorative and hygienic effects, flush doors, shop facias, balustrades, fireplace surrounds, table tops and other purposes.

MODERN FLOOR COVERINGS

BY LL. E. WILLIAMS

The range of patterns and colours obtainable in modern flooring materials is legion, but whatever substance the architect may select—marble, rubber, cork or other composition—the appearance of the finished floor will depend very much upon his choice of design; and to design a floor harmonious both in form and colour is not easy, requiring a knowledge of the limitations and peculiarities of the various materials available.

THE principal points to be considered before specifying a particular kind of flooring are: wearing quality, resilience, adhesion and abrasion, maintenance and repair.

Any division of flooring materials is bound to be arbitrary, but some classification of the various coverings is necessary for the sake of clearness. Many marble mosaic and tile floors laid in classic and mediæval times still fulfil their functions, and may be styled permanent. Compared with these, parquet, magnesite and rubber floors may be called semi-permanent, although a thirty-year guarantee is given with some of them. Linoleum, in many instances, is as permanent as rubber, and the thicker kinds have lengthy lives.

MARBLE, TERRAZZO, ETC.

The laying of marble, mosaic, terrazzo or tile floor coverings is a simple operation, requiring only a concrete foundation screeded to receive the material, the design in all cases being carried out to the architect's drawings. Mosaic floors may be of tesseræ made of sanded glass, burnt clay, or marble cubes. The addition of silica in the first gives a roughened surface to the paving and prevents slipping; the second is inclined to become slippery from wear and a non-slip material should be mixed with the cement or alundum mosaic cubes incorporated in the pattern; the third is the most common type of mosaic floor and depends for its colour scheme on the natural colours of the marbles used. Mosaic paving may be set piece by piece on to the bed, but the usual commercial method is to fix the tesseræ face downwards on to paper at the works and bed the slabs in one operation on the job, finally soaking off the paper and grouting up the joints.

Terrazzo, which is composed of crushed marble aggregate and cement, requires careful laying to obtain the best results, and much depends on the final trowelling and polishing. The material has a tendency to crack and should therefore be divided into panels with brass or ebonite strips fixed into the screeding. These strips, which should enclose panels about twenty square feet in area, may be formed into patterns. The fan-shaped divisions in the dancing space at the Hotel Jefferson, Saint Louis, are a good example of what can be done by suiting the design to the material. The colours of the marbles can be brought out still further by setting the aggregate with a white Portland cement. The design of a terrazzo floor may be varied by the introduction of panels of a material which is composed of crushed coloured enamel or glass mixed with coloured cement, and is, in fact, a glass terrazzo in which almost any design or pattern can be executed. When set hard the surface is polished in much the manner of an ordinary terrazzo. Precast terrazzo is another variety which can be laid in geometrical patterns like marble, and overcomes the somewhat monotonous appearance of large spaces of plain terrazzo, as may be seen in the entrance hall to the Bournemouth Pavilion.

All forms of terrazzo floors have a tendency to become slippery when wet, but this may be counteracted as in mosaic flooring by an addition of alundum aggregate to the cement. The same aluminous ore is incorporated in alundum tiles, which form a good floor and do not wear smooth under heavy traffic. These tiles make a safe paving for a swimming pool surround or the floors of shower baths, and they can be interspersed with ceramic tiles of different colours to form a pattern.

The majority of marbles are not suitable for very heavy wear when laid in large slabs, and it is important to choose a colour scheme combining marbles of equal hardness. There is a shopping arcade in the West End of London where the unevenness of the paving is due to the more rapid wearing away of the white slabs than the green. Marble can be very dangerous when wet, but the travertine floor in the new Underground building at Westminster, owing to its pockmarked surface, has given sure foothold to a nation in a hurry.

ASPHALT

A plain asphalt floor can be laid with good effect and is frequently the best damp-excluding material for covering an old stone or brick paving which has been laid (as so often was done) directly upon the ground. The asphalt should be carried up the walls as a skirting, and when polished forms a pleasant foil to brightly coloured rugs. Colorphalt, a rock asphalt fluxed with Trinidad Lake asphalt in which a permanent colouring pigment has been incorporated, is laid in a similar manner, and the finished surface presents a smooth and dustless surface which makes it suitable for billiard rooms, operating theatres, or hospital wards. In chemical works and laboratories where corrosive acids are likely to be spilt, an acid-resisting colorphalt is an excellent type to employ.

MAGNESITE

The various manganese or composite floorings consist in most instances of a magnesite compound combined with various fillers such as asbestos or sawdust. This material may be laid directly to concrete without a cement screed in one or two operations, and it sets ready for use in about forty-eight hours. Different firms have each their own specification, which should be followed when using their special compound. These floors are hygienic, waterproof and dustless, and the

[*Designed by S. Chermayeff.*

MARBLE

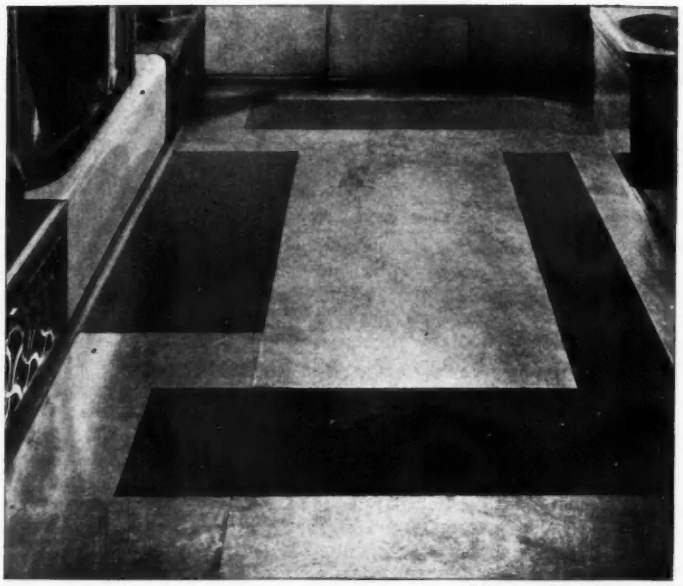
The foyer of the Cambridge Theatre, Seven Dials, London (Wimperis, Simpson and Guthrie, Architects), laid with marble to a special design by the decorative artist: pale yellow ground; motifs in brown, dark grey, Turkey red and black; the surround is brown.

omission of screeding is a considerable saving when large areas are to be covered. The most satisfactory method of laying is to spread the floor from wall to wall and to finish with a coved skirting. The compound being a plastic material, obtainable in several different colours, simple patterns and borders form the best type of design, but with some of these floors a variegated effect can be produced by sifting the second coat of the material on to that previously spread, though this requires skilled workmen and should only be undertaken by a firm which specializes in this type of finish. Some firms lay a wire mesh reinforcement between the two coats of flooring material when the sub-floor is boarded, to counteract shrinkage.

Soap and soda must not be used in cleaning a magnesite floor; if the surface becomes very dirty it may be rubbed over with steel wool or steel shavings in place of a cloth, and then polished as a linoleum with a polish diluted with turpentine. A periodical dressing of raw linseed oil is beneficial, as it feeds the floor and preserves the colour. Each firm supplying these floors usually gives written instructions for the care of its particular patent.

A new type of manganese floor has been recently introduced into this country, although already well known and extensively used on the Continent, especially in Holland. It consists of the usual magnesite (magnesium chloride and filler) but includes a patented asphalt emulsion known as Dermas. The resulting floor, which is laid in a similar manner to other manganese floors, possesses the same varied range of colours, but, on account of the asphalt which is present throughout the thickness of the compound, does not require the periodical application of oil.

RUBBER AND ALUMINIUM



[*Designed by S. Chermayeff*

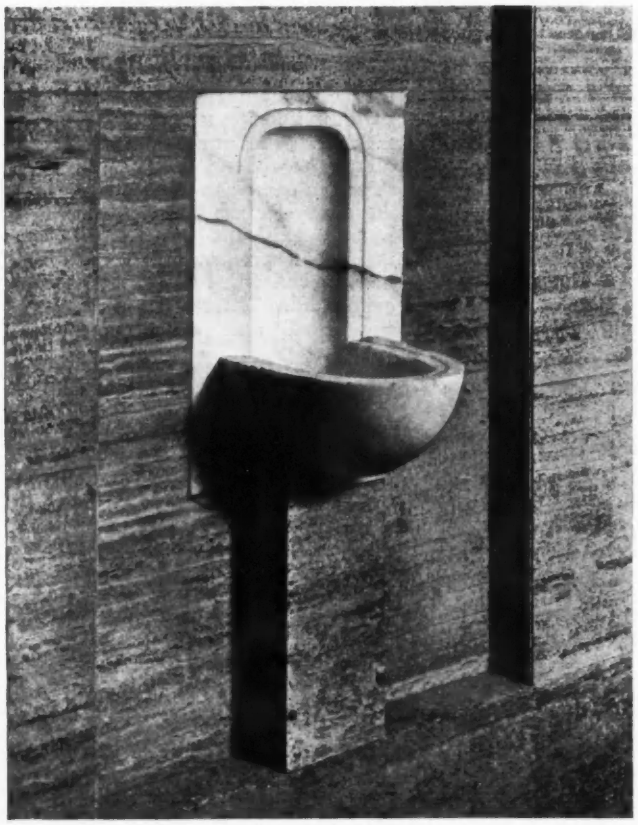
An unusual floor of blue rubber and aluminium-faced plywood, designed for a bathroom which is finished in blue and silver cellulose.

RUBBER

The materials used in rubber flooring are known as "pressed" and "drum cured" from the methods employed in the final process of vulcanization. Rubber tiling is produced by the former and made up strips of patterned flooring by the latter process. Strips are usually supplied in rolls fifty to a hundred feet long and up to six feet wide. Strip or sheeting material is supplied by the "pressed" method by a number of manufacturers.

The sheets can be plain or inlaid with any design before vulcanizing, but in the past one of the drawbacks to this type of floor for large areas has been the limited width in which it was obtainable. There now exists, however, on the Continent (but not yet in this country) a plant capable of producing sheets up to seventy-five feet by fifteen feet wide, and this is in fact a rubber carpet that can be made to any architect's design. Pressed rubber tiles are laid separately and the design worked out by the rubber tiles on the floor; this has an advantage over the rubber carpet, as worn tiles can be replaced without taking up the whole floor covering. Good rubber tiling, whether in sheets or tiles, should be smooth, non-porous, and when bent double for several hours should not break or crack. A standard has now been agreed upon by the leading rubber manufacturers in this country which is known as the R.G.A. standard, and a

TRAVERTINE



[*Underground Building, London. Adams, Holden and Pearson, Architects.*]

The walls as well as the floor here illustrated are of travertine: the deeply pitted surface gives a very sure foothold.

list of makers of standard rubber flooring can be obtained from the Rubber Growers' Association.

The thickness of sheet rubber for good work should be not less than $\frac{3}{16}$ in. and for tiles $\frac{3}{8}$ in., but in choosing a flooring that is not a standard R.G.A. material the architect must select a quality that will meet all requirements—i.e. resiliency combined with toughness.

The condition of the sub-floor is of the greatest importance for all types of rubber coverings. To ensure perfect adhesion the surface must be clean, dry, and compact. Casein cement is sometimes used for laying rubber tiles on concrete, as it forms a mechanical joint with the cement screed and when dry gives a good grip to both rubber and sub-floor, but casein has no adhesive properties until dry, and the tiles must be held in place and kept from curling at the edges by weights placed on them for some six to eight hours after laying. Tiles laid in this manner can be pushed into place, and some of the cement is purposely squeezed between the joints, thus cementing all the tiles together and making a good joint with only a hair line showing on the surface.

Rubber solution is also largely used, and, after exhaustive tests, the self-vulcanizing variety has been found most satisfactory, as in a measure it successfully withstands the attack of moisture emitted from concrete floors, which is fatal to casein.

The ordinary rubber-benzine solution adheres at once to the tile, which is practically immovable as first laid. Although this adhesive is absolutely waterproof it does not form a mechanical joint with cement screeding. Because it contains sawdust material, magnesite forms an excellent base to lay rubber upon. Curling of the corners has been counteracted by one firm by supplying the rubber welded to an asbestic base. Provided the welding between the two materials does not fail there is much to recommend this flooring. Failure of ordinary rubber floors occurs, however, very often through careless or hurried laying, so that the adhesive which is applied to both floor and tile has not had time to become dry and "tacky" before the two surfaces are brought together. None but the most reputable firms should be employed for this operation.

Rubber tiling should never be laid on new boarding, however good, until the inevitable shrinkage has taken place. If an existing wooden floor is too uneven to be planed off, a good method is either to take it up and substitute a strong plywood floor, or to cover the irregularities of the old floor with plywood sheets to obtain a level surface. Both rubber and linoleum

Bournemouth Pavilion.] [*Home and Knight, Architects.*

The terrazzo flooring to the main entrance vestibule is carried out in cream and light sienna, which forms an excellent ground for the light Pompeian red of the hard-surfaced fibrous plaster fluted columns with the light fittings striking a deeper note of the same tone.

TERRAZZO

are best finished to a coved cement skirting having a toe the thickness of the floor covering, but where a wooden skirting exists a small rubber coving now on the market makes a neat finish.

PARQUET

Parquet flooring is a veneer of hardwood on other material laid on boarding. The "inlaid" wood parquet is usually made up into panels before laying, and any design suitable for inlaid wood can be executed, the pattern being determined by its suitability for the position. As in the case of rubber the condition of the sub-floor is of great importance; old boards should be planed smooth and new floors to be covered with parquet should be left uncramped. A sub-floor of plywood is an excellent substitute for deal underflooring for parquet. Indeed, the various uses of plywood are not nearly sufficiently exploited, and provided narrow strips are laid over the runs of pipes, etc., whole floors may well be covered with large sheets of it.

CORK, ETC.

In a pure cork parquet the tiles are composed of natural clean cork curlings. These curlings are compressed under heat until the liquefaction of the natural gums forms a cementing material without additional adhesives. The firms supplying this type of floor manufacture the tiles in a number of different shapes and sizes, but a convenient unit is a square 12 ins. by 12 ins. and from $\frac{1}{4}$ in. to $\frac{1}{2}$ in. in thickness. Abrasion tests carried out by the National Physical Laboratory show the cork parquet to be nearly twice as durable as oak.

The material is best laid in its natural colours, which give a pleasing variety of rich brown tones. A cork tile coving is also made, which forms a neat and hygienic finish to this type of floor.

For very hard traffic an American material known as J.M. floor tiling, manufactured from mineral gums, asbestos and various colouring pigments, has been used in several British commercial buildings. The tiles are exceptionally thin, only $\frac{1}{8}$ in. and $\frac{3}{16}$ in. thick, and can be laid with a special mastic on either concrete, boarding or metal. Being stain- and fire-proof, burning cigarette and cigar stubs will not injure the surface, and this renders it a good flooring for clubs

LINOLEUM

The basis of linoleum is a more or less equal mixture of prepared linseed oil and cork dust, pressed on to a canvas backing under heat. The pattern is either surface-printed by means of colour blocks, or inlaid, i.e. the powdered linoleum mixture is pressed through stencils—one for each separate colour—on to the canvas. For hard wear the latter is the only satisfactory patterned material, as the design goes right through the full thickness.

Linoleum may be glued to concrete or boarding, but the sub-floor must be level, as any unevenness will in time cause a crack, for, unlike rubber, linoleum will break "short" if bent backwards on itself. Cork is frequently laid under thin linoleums and adds greatly to the softness, resilience, and life of the floor. On wooden floors this underlay can be stuck with casein glue, but on concrete it is necessary to employ a bitumen, as moisture will disintegrate the gum which holds together the cork

This photograph of the lounge of the Stoke Poges Golf Club House was taken two years after the rubber flooring was laid; there are no perceptible signs of wear. The colours employed are mottled light and dark green, and mottled light green and white in the alternate sections.

RUBBER

particles. Linovent is a bituminous material coated with cork crumbs and has the double advantage as an underlay of protecting the linoleum from wearing on uneven joints and of allowing air to circulate over the wooden sub-floor.

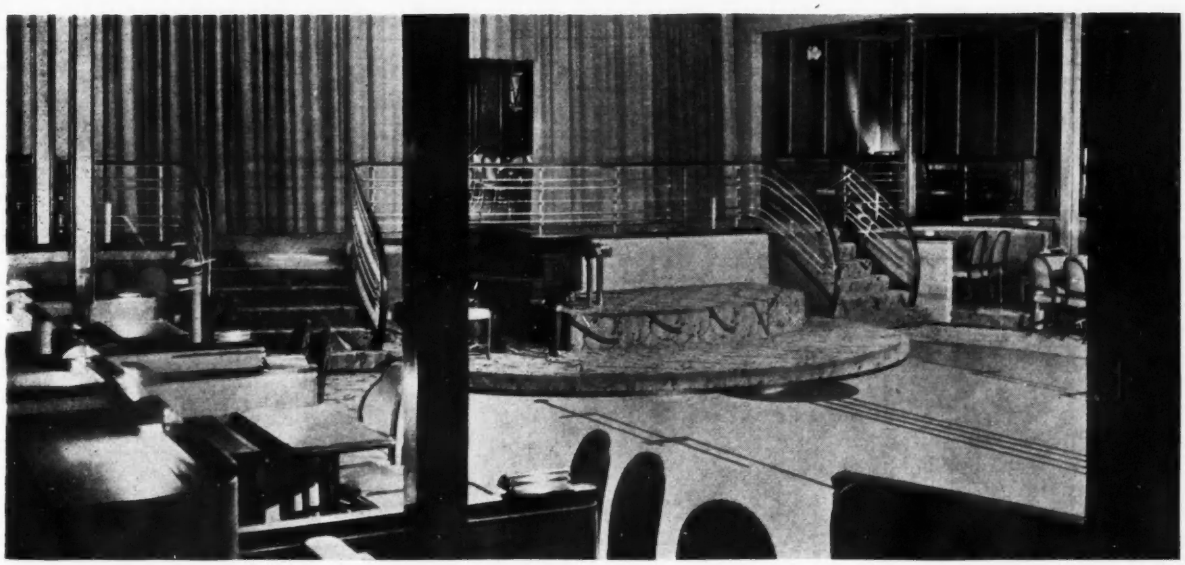
From the description of the process of manufacture it is clear that individual designs entailing the preparation of special printing blocks or stencils are expensive. This deadlock has been overcome by Triolin, Linotile, Korkoid, and Lintile, patent substances of the linoleum type, the first of German manufacture, the second American, and the others British. These materials are cut into tiles of different colours and shapes which may be laid to an architect's design, in the same manner as rubber tiling. It cannot be too strongly urged that with both rubber and linoleum floor coverings it pays to deal with firms of repute and experience.

[*Designed by Alpago Novello.*

Flooring for a vestibule, designed in linoleum for an exhibition of LINOLEUM decorative art which was held last year at Monza, near Milan, Italy.

CELLULAR RUBBER, AND CARPETS

The resilience of Sorbo cellular rubber renders it an excellent underfelt to woven carpets, and far more hygienic than felt or drugget. Another Sorbo product is known as " Luxury flooring " and consists of a combination of rubber underfelting with a sheet of solid rubber $\frac{1}{16}$ in. thick, vulcanized on to the upper surface, the whole forming a rubber carpet, $\frac{3}{4}$ in. thick, of exceptional resilience. These are very suitable for hospitals and places where silence and extreme cleanliness are imperative. The spring in the felting absorbs the friction, and the top layer, although thin, has in consequence a much longer life. If this floor covering is used in domestic work the feet of large pieces of furniture should have some protection, as the constant moving to and fro of a heavy castored bed or grand piano may give trouble in the long run. Woven carpets are less imperative today in a well-furnished room than in Victorian times, and the modern impervious floorings only demand rugs for comfort and beauty. Beside the familiar pile and worsted carpets, either machine or hand-woven, hand-hooked rugs can be designed and made to harmonize with any colourings. These are in many cases preferable to Eastern carpets, which are notoriously difficult to introduce successfully into a modern scheme of decoration. The success of nearly all coverings depends upon the condition of the sub-floor. The common instinct to cover up a defective or worn floor with rubber or linoleum is a fatal mistake. A good covering must have a proper sub-floor to give satisfaction.

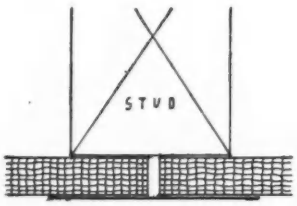


Night Club, United States Liner Leviathan] [*Designed by Eugene Schoen.*

A modern treatment of linoleum, in black on an orange ground, designed for the floor of the night LINOLEUM club on board a modern liner. The general scheme is dark brown, gold, crimson, orange and blue.

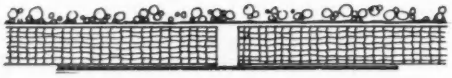
WALLBOARDS

JOINTING & FIXING DETAILS
HALF FULL SIZE



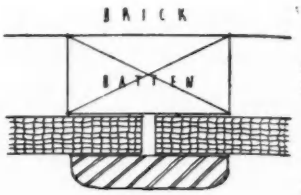
NAILED TO STUD PARTITION

JOINT FOR DISTEMPER OR PAINT, etc. COVERED WITH PAPER-FACED LINEN STRIP 2½ INCHES WIDE • STUCK ON



NAILED DIRECT TO BREEZE

JOINT FOR PAPER OR PLASTERING. COVERED WITH 4" STRIP WIRE MESH BEDDED KEENES & GLUE SIZE



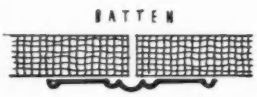
NAILED & BATTENS on BRICK

JOINT FOR DISTEMPER or PAINT. WOOD COVER MOULD NAILED THROUGH BOARDS & BATTENS

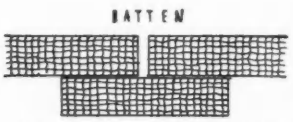
JOINTS BUTTED FLUSH & ARRISES SOFTENED

A PAPER COVERED GYPSUM BOARD

BUTT JOINTED & FLUSH: NOTE REINFORCED EDGES.

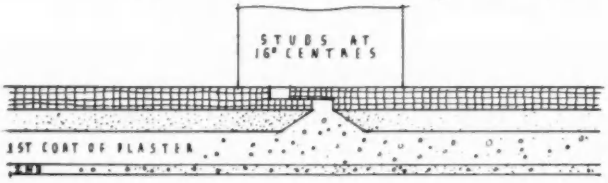


ANAGLYPTA STRIPS TO COVER FLUSH-BUTT-JOINT



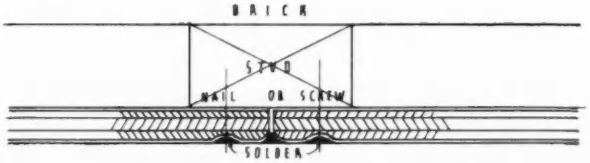
COVER STRIP OF SAME MATERIAL AS GENERAL WALL COVERINGS

SOME FURTHER JOINTS FOR PAINT OR DISTEMPER FINISH



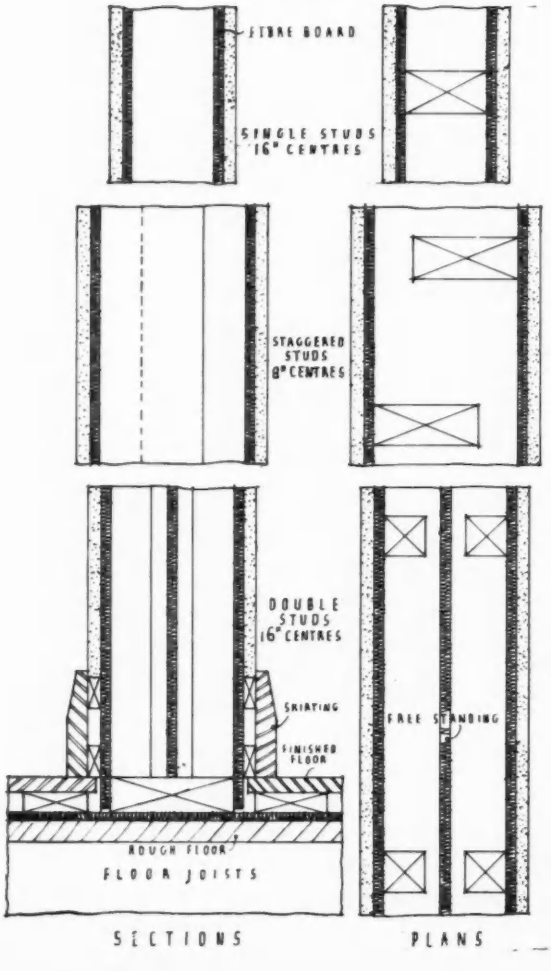
WOOD FIBRE BOARD WITH PLASTER FACE TO TAKE A PLASTER FINISH • FIRST COAT 3/8" • SECOND COAT 1/8"

SUBSTITUTION OF FIBRE BOARD FOR LATHING ELIMINATES RISK OF CRACKS FROM SHRINKAGE

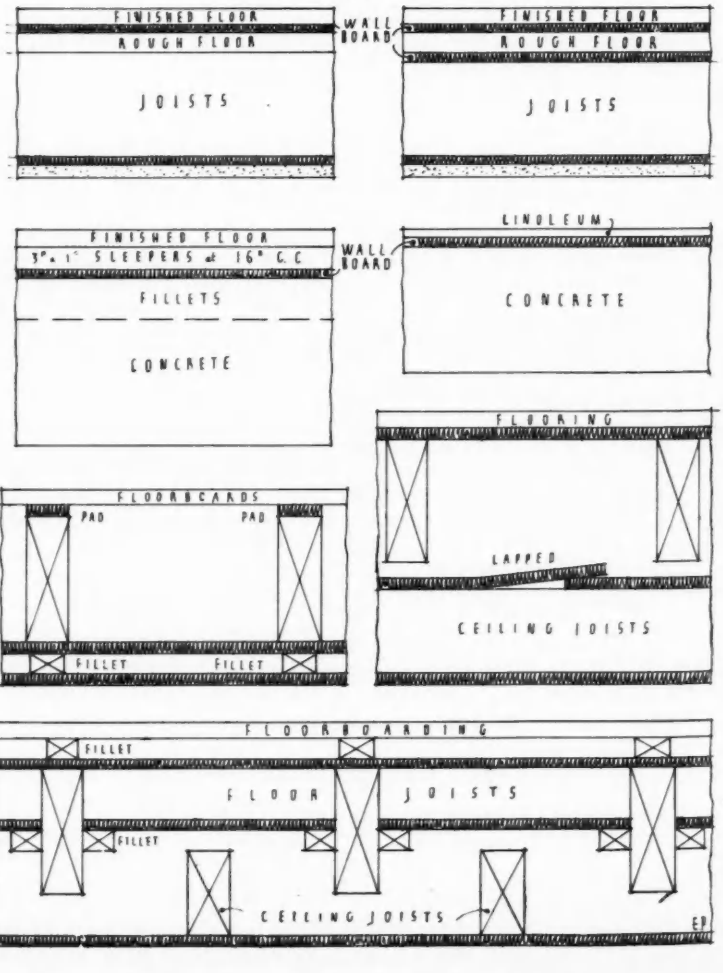


METAL FACED PLYWOOD NAILED TO STUDDING. EDGES OF SHEETS ROUNDED & BUTT JOINTED, & CAVITY FILLED SOFT SOLDER, RUBBED DOWN TO GIVE CONTINUOUS FLUSH METAL SURFACE: NAIL OR SCREW HEADS TREATED SIMILARLY

INSULATING PARTITIONS
ONE EIGHTH OF FULL SIZE
PLASTERED BOTH SIDES



VARIOUS METHODS OF SOUNDPROOFING FLOORS WITH WALLBOARDS



MODERN WALL-BOARDS

BY FREDERICK ETCHELLS

In the past the architect has been largely dependent on "natural" materials with all their delightful qualities, but with all their tendency to behave in unexpected and undesired ways. In recent years a number of synthetic products have been evolved, which also have their good qualities and their defects. It is proposed here to examine certain of these, in so far as they relate to wall-linings.

AN important aim of the present-day architect is to achieve two concurrent results that seem to him desirable: homogeneity of surface and a high degree of insulation, and perhaps also of absorption. These results are by no means easy to obtain apart, and to obtain them in conjunction is extremely difficult.

All the known forms of plaster—whether "soft" or lime plaster, or the hard gypsum plasters set on a coarse backing of themselves or on a hard backing of cement and sand—present certain difficulties. Their successful working depends on a traditional craftsmanship which includes a highly developed "touch" on the part of the individual plasterer, which it is hard to analyse and impossible to guarantee. The use of modern sawn laths, the chemical treatment by which hair for plastering is now obtained and other factors all conspire to make the plastering of his buildings a nightmare to the present-day architect.

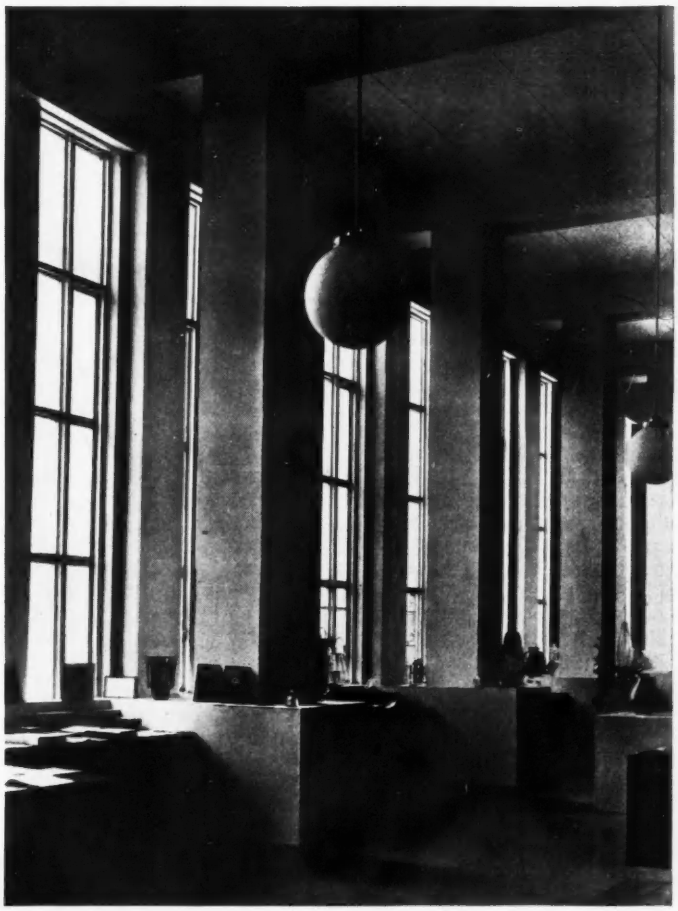
Moreover, the insulating qualities of traditional plaster are relatively poor. Lime plaster, it is true, if left unpainted, has qualities of absorption and avoidance of condensation which are valuable, in spite of its fragile nature. The hard or gypsum plasters, on the other hand, are liable to give condensation and are resonant and a little uncomfortable to live with under ordinary conditions.

Both types of plaster demand the use of considerable quantities of water for their application. This increases the length of time necessary for a new building to "dry out," and renders it difficult to apply any permanent form of decoration until a considerable period has elapsed.

On the other hand, traditional plastering can have great beauty of texture, and it gives a nearly perfect homogeneity of surface, a quality precious to the mind of today. Any substitutes offered to us, therefore, must have a high degree of usefulness and adaptability.

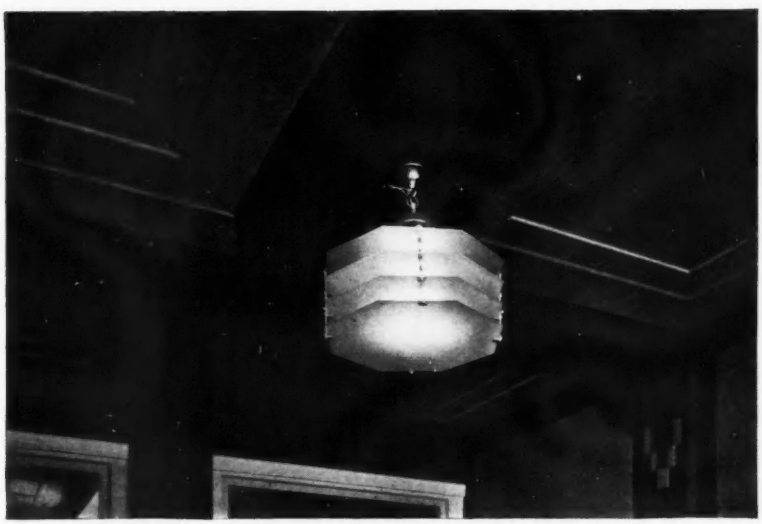
We may profitably first examine what it is that we would desire in the way of *ideal* wall and partition finishings.

In spite of the fact that brickwork, whether in the form of solid or cavity walls, is likely to continue in use for many years to come (particularly in certain countries, of which this is one), the fact remains that it is fundamentally unsuitable and uneconomical in conjunction with framed buildings, whether these be of steel construction or of



WALL-BOARD IN A TEMPORARY BUILDING

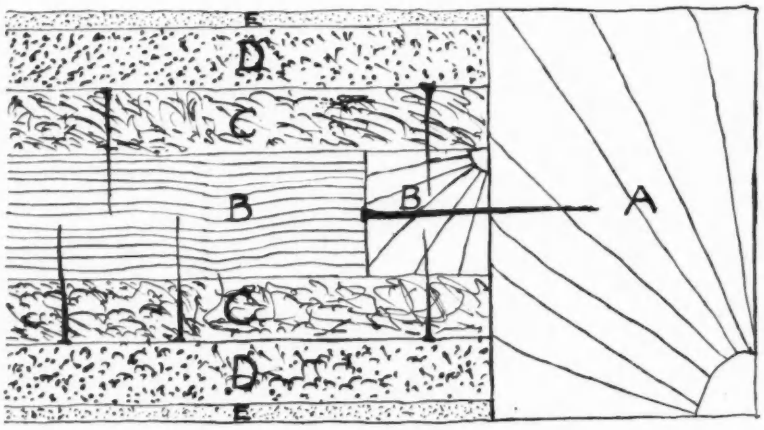
A gallery in the Fine Arts section of the Rotterdam Exhibition: walls, ceiling and bases are all lined with wall-board.



Masonite Offices, E.C.] [*H. A. Scott, Architect.*

PERMANENT WALL-BOARD FINISH

This illustration shows the possibilities of permanent application of certain types of wall-board. The walls, including pillar treatment, and the coffered ceiling are of this material.



Sketch to illustrate the use of wall-board in plaster panels, set in oak framing: (A) Oak stud, (B) fillets, (C) wall-board, (D) gypsum plaster, (E) lime plaster (waterproofed for external work).

WALL-BOARD BASE FOR PLASTER

post-and-beam construction in reinforced concrete.

What we need, ideally, under such conditions, are inner and outer linings composed of thin membranes, of good insulating qualities and set apart at a suitable space, say of 3 or 4 ins., in order to provide a "cushion" of air. Such "walls" would carry no weight and would perform no structural function; they would be merely protective skins between ourselves and the outside elements, and against the loss of carefully and expensively generated warmth within. One dreams of such membranes of semi-translucent glass, and of a glass less brittle than that we know; but such things are for the future. Under present conditions we are hardly likely to attain our ideal, and we must do the best we can with the materials at our disposal.

A sensible addition to comfort, and one that has been in use for many generations, is that of panelling. In the past this has taken the form of moderately small panels of oak or other woods, set in a framework of rather stouter material. Such panelling, especially since the introduction of central heating, is liable to warp and split, and is in many ways unsatisfactory, but it does at least provide an insulating vehicle between man and the elements, with a consequent increase in warmth and comfort.

Taking things as we find them, we may say that we have at our disposal a number of "modern"—and by that I mean current or present-day—synthetic materials which we can use as wall linings.

These resolve themselves into a limited number of categories. We have the well-known type of material of glass, mainly used so far for bathrooms, kitchens and larders; the metallic-faced plywoods, which are suitable for a number of purposes; and the various wall-boards, which have an almost universal use, if properly employed.

I propose to deal more especially with the last-named materials. They may be divided into four categories: the boards formed of wood-pulp (the equivalent of newsprint) and those formed of wood-fibre; the boards formed of such materials as cane-fibre or of root-fibre; the plywoods and the development of these in the form of built-up or laminated boards with a wood veneer; and also the "plaster" boards composed of a gypsum filling, with their outer surfaces of a tough paper.

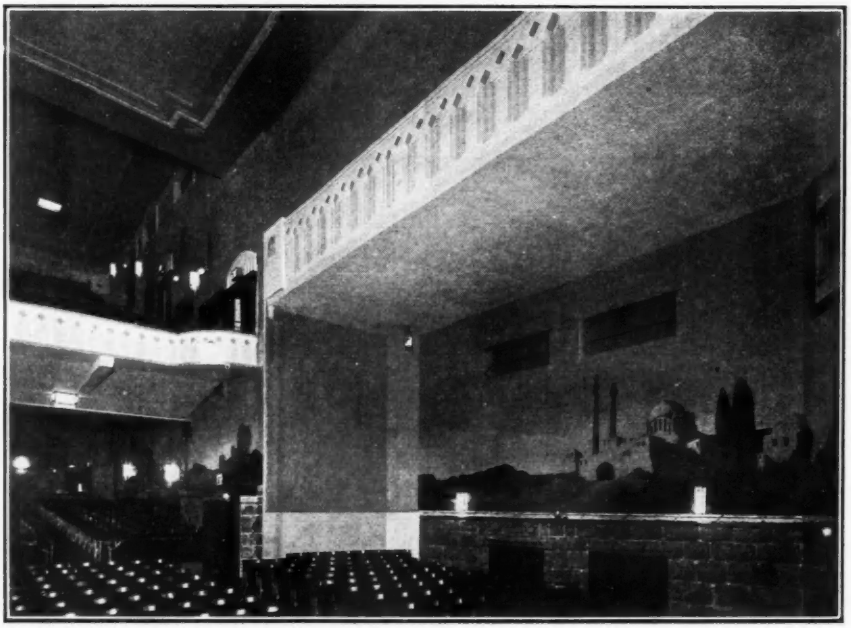
The avoidance of condensation has been mentioned; this may be taken nowadays as a minor virtue. It is found that under modern conditions of centrally-heated buildings this difficulty is not a great one, and, within limits, the point may be considered as negligible.

Absorption of noise from without can be achieved by the use of acoustic plasters and of slag wool. It is of value in the case of hospitals and certain large offices. But a distinguished surgeon has told me that it takes him time to recover from the dulling effects of visits to patients housed in rooms so treated.

A more important point is that of the avoidance of transmission of noise from room to room or from floor to floor. In this connection some of the patent wall-boards are of great value, rivalling, or nearly so, the special products made of eelgrass for this purpose.

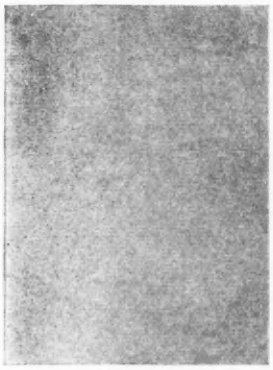
What, then, are the uses of the many kinds of wall-board put forward for our consideration today?

First of all, used in an elementary way—i.e. with cover-slips to hide the joints—they provide a warm lining to structural interiors and enable us to avoid the use of plaster of a normal thickness, with all the consequent dampness and chemical action, and regrettable uncertainty. This is a great gain, but, admittedly, it is a crude method of using wall-boards, as it breaks up the wall surfaces and, except under special conditions and with careful designing, is apt to be unsightly. This treatment seems to be the



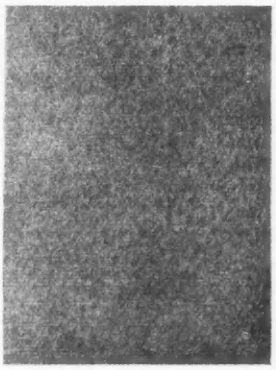
One of the side walls of the Odeon Cinema Theatre, Perry Barr, Birmingham, lined with an acoustical wall-board. The decorative scheme superimposed in no way impairs the desired sound effect.

ACOUSTICAL WALL-BOARD, DECORATED



Essex

Celotex



Insulite

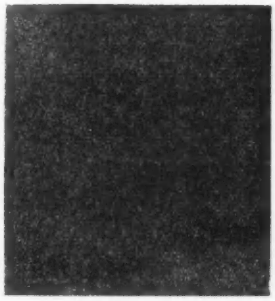
Tentest

Masonite

Masonite

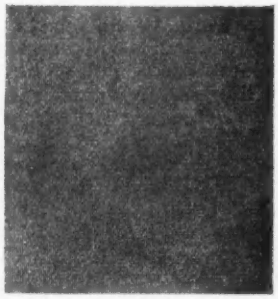
Temlok

Donnacona



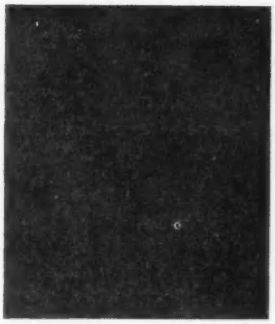
Treetex

Maftex

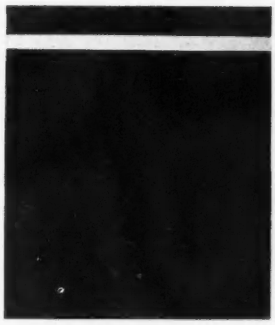


B.P. Board

Gyprok



Beaver Board



Sundeala

Jupiter

FOURTEEN VARIETIES OF WALL-BOARD

The above photographs were specially taken for THE ARCHITECTS' JOURNAL from actual specimens of the boards indicated, under a powerful side-light from the left, in order to show up as clearly as possible the surface texture of each. The wall-boards here illustrated are obtainable in this country.

only possible one with wall-boards of a "pulp" nature, which are particularly liable to movement.

But with certain types of wall-boards, of a more fibrous nature, we can go a step farther. The joints can be covered with tape or scrim, or, better still, with a strip of fine metal gauze. These joints are then filled with a mastic or with a gypsum plaster in which the scrim or metal gauze is embedded, and the whole is set, or floated and set, with one or two coats of gypsum plaster. These coats of plaster are quite thin and the amount of moisture involved is reduced to a minimum. A further development is a similar treatment, but using a plastic paint in lieu of plaster. Quite perfect results, and a great variety in texture, can be obtained in this way, and if the work is carefully carried out, a true homogeneous surface can be obtained, as is also the case with boards which have a gypsum base. This unity of surface is of the utmost importance, for the modern treatment of interiors tends more and more to plain surfaces combined with purity of line.

The various plywoods and veneered laminated boards have more of the nature of panelling, and a large field of exploration in this direction is open to the enterprising architect or decorator. Such boards can be flush-jointed with an extremely fine and close joint, and the considerations of absolute homogeneity of surface mentioned above do not apply in this case. A wide variety of new, or hitherto little used, woods is now open to us, and the immense strides made in the built-up or laminated board of recent years helps, at least, to solve the problem of the effect of central heating on timber.

The metal-faced plywoods have played, and will continue to play, a great part in modern interior work. Aluminium-faced boards have been much used, and have their own use and value. But various alloys of a non-corrosive kind are becoming available, and we should have at our disposal, within the next few years, a variety of brilliant surfaces to play with. Delightful colour effects can be produced by chemical means on some of these metal facings.

Sheets of glass of various degrees of opacity or translucency have been employed for many years, and their use could be greatly extended. There is no need to limit them to bathrooms and lavatories.

The use of cellulose enamel on certain types of wall-boards, some of which are manufactured in various textures, can be made to produce most charming results.

In the use of these modern synthetic wall-linings there lies, therefore, an attractive field of adventure for the architect and the designer; perhaps the more so as the origin of such materials may often be found in actual needs of today.

Naturally, moreover, a new and attractive material engenders a desire to use it for its attractiveness, so that we need not waste time in arguments as to whether the need creates the material or the material the need. The lively architect will indulge his curiosity and his taste for experiment by "trying out" any or all of the materials put forward for his consideration.

Wesleyan Church, Bristol.] [*Sir G. Oatley and Lawrence, Architects.*

CURVED SURFACES IN WALL-BOARD

In this church the whole of the surfaces above the dado, including pillars and vaulting, are finished with wall-boards, with excellent and simple decorative effect.

House, Newcastle-on-Tyne.] [*A. J. Lamb, Architect.*

FLAT SURFACES IN WALL-BOARD

This illustration indicates the possibility of obtaining unbroken expanses with fireproof plaster boards; the house is entirely lined internally with this material.

MODERN PAINTS AND DECORATIVE FINISHES

BY HAROLD TOMLINSON

A few years ago, the range of materials which could be employed by architects for decorative purposes was very small indeed, and almost all the effects were obtained by means of oil paints, varnishes, distempers and polishes. Today there are so many ways of finishing both external and internal surfaces that classification is a difficult task.

BUILDINGS tend more and more to rely on their cosmetics, and even stone is applied in so frail a veneer as to suggest an affinity with paint, while stucco and other "variable disguises" are used in increasing degree to conceal the uncouthness of the utilitarian core. Rough brickwork or concrete is gradually softened by plaster, ultimately to receive paint in one form or another—sometimes merely to give a pleasing appearance to the surface, but often to simulate the colour and texture of more expensive materials. Paints are used also to conceal or to nullify defects due to the physical properties of the more refractory building materials, expansion or contraction, swelling of surface or roughness being hidden by paints which are sufficiently elastic and varied in texture to make a virtue of the blemishes which they conceal. Still, even in new products, the old essentials remain. Something must be applied which will spread evenly, adhere with certainty, and harden sufficiently rapidly to obviate disfigurement by deposits from the atmosphere, or by the accidents of early traffic.

The time factor is of increasing importance, for delay may result in costly dislocation of business, particularly in commercial buildings, cinemas, and theatres. Hence, it has come about that processes which are in themselves expensive may yet be justified if they can be rapidly carried out. For large areas, spray painting has at last come into its own. The method is by no means a new one; but it has too long been regarded with distrust, because the improvements which have been made in up-to-date apparatus have not been sufficiently rapidly appreciated.

Today, by the selection of suitable pigments and improved methods of manufacture, the settling of heavy deposits at the bottom of the container is avoided, and the component ingredients of any paint may be applied in perfectly uniform proportions. In addition to this, the thickness of the film is exactly controlled, so that delicate stippling and grading effects which were formerly achieved only with great skill and labour in brush-painted surfaces are now done with ease by means of the spray. With spray-painting, fewer coats suffice, and the method ceases to be economical only when power is not available to produce a sufficiently high pressure, and when a hand pump is insufficient for the work on hand. Spray-painting is most efficient in covering large areas, plain, graded, or stippled; but fairly complicated variations in local colour, tone, or shade, may be carried out if stripping materials are used. Stripping paints are paints of poor adhesion, and their purpose is to mask temporarily surfaces which are subsequently to receive different treatment, surplus paint from previous operations coming away with the stripping material, or surfaces already finished being protected from subsequent activities.

The recognition of the value of spray-painting is no doubt due in large degree to the increasing employment of cellulose. Cellulose is not a new material, but only comparatively recently has it proved a serious rival to the older finishes. During the war, aeroplanes were spray doped with a cellulose material, and motor manufacturers were not slow to realize the benefits which a similar process would confer on mass-production methods.

The speed with which cellulose can be applied makes it peculiarly suited to the decoration of commercial buildings of all kinds where, as previously mentioned, it is important to avoid lengthy processes.

Cellulose paint differs from oil paint in that it hardens not by slow oxidization, but by rapid evaporation of the solvent. For this reason, it is difficult to apply by means of a brush, as partial drying takes place during a single brush stroke, and marks of joins are almost unavoidable. On small surfaces, brush application is not impossible, once the knack of flowing rather than of brushing has been mastered, and as brushing cellulose is rapidly improving in ease of working, it is not unlikely that before long a really amenable cellulose brushing finish will be marketed.

Cellulose has its own peculiar merits and limitations. Owing to gradual evaporation of plasticizing agents and slow decomposition of the nitro-cellulose by ultra-violet rays, the surface tends to become more brittle on prolonged exposure. This brittleness being particularly noticeable at sharp angles, mouldings should be designed with regard for these qualities. It is not solely on account of mass-production methods that modern motor cars have their beads pressed from their panels rather than applied. Cellulose would crack at even the minute joins of metal-to-metal contact, and piano makers, who use it almost exclusively in preference to French polish, have adjusted their mouldings accordingly.

In fine cabinet work, where transparent cellulose is used to show up the grain of precious woods, a final layer of French polish is sometimes given. This, by its different refraction, prevents the thick cellulose layer from showing up on catching the light; but it also renders the work liable to the defects of French polishing, such as softening by alcohol, or discoloration by heat. To remove the finishing film and re-polish is much less tedious than it would have been if the whole process had been carried out by hand rubbing, and for particularly fine work the process is perhaps justified.

Among the chief advantages of cellulose may be mentioned its hardness, and its resistance to atmospheric conditions and to alcohol. Spilt perfume, for example, would re-dissolve French polish; but it would not affect cellulose lacquer. These make it suitable for counters, and furniture in bars and restaurants. Its hardness is so great that fairings to aeroplane fittings are being made by building up many coats to a suitable thickness on a wooden core, the core being extracted when the paint has hardened.

Recently, metallic paints have come into greater prominence. These consist essentially of metal in a high state of division, suspended in a suitable vehicle, which may be either an oil or a cellulose varnish, though the powders are sometimes added to opaque paints to give them brilliance and lustre, or to modify their colour.

Aluminium is by far the most satisfactory metal to be employed in this manner (if one excepts the rare use of pure gold). Bronze powder, "gold," copper, etc., give good results in interior decoration, provided that they are used with suitably selected vehicles; but even in external work a coating of protective lacquer provides a durable protection.

Aluminium paint, one of the most valuable of modern paints, is not so costly as it once was, and as it can now compete with oil paint on this score, its inherent virtues will become more widely appreciated. It is made from aluminium bronze powder suspended in a suitable vehicle: the vehicle varying with the nature of the work, and in order to secure tone variation. The aluminium powder behaves in a way which is peculiar to itself. The powder consists of aluminium stamped into minute flat pieces, which float to the surface of the vehicle, there being bound compactly on each other in a dense resistant layer. This metallic

coating protects the under-lying vehicle, and its opacity is valuable in hiding colours which could not be concealed by several coats of ordinary paint; moreover, the homogeneous film is a safeguard against "bleeding." A burnished surface, almost indistinguishable from polished aluminium, may be produced by applying the powder to a suitable varnish in a "tacky" condition and protecting the exposed metal with a thin coat of suitable colourless varnish. The covering of aluminium paint with tinted lacquers is not advisable, as the dyes have a comparatively short life. Whether aluminium is used for decoration or protection, it is equally important to make sure that it is free from adulterants, of which the most common is mica. It has frequently been suggested that mica in aluminium paint may be detected in a shaken sample because it remains longer in suspension than the aluminium powder; but the specific gravity of the adulterant is too near that of the metal to make the test of value, and chemical tests alone are reliable. These, unfortunately, are too complicated to be used in normal circumstances. In paints once applied, mica is not readily apparent, and rapid deterioration will probably be the first evidence of its inclusion. It is best to buy the powder from a reputable firm who will guarantee its purity, and to mix it with a vehicle recommended by the vendor.

Plastic paint is a new material which has been greatly abused. In low relief it permits of rich and varied treatments, and is capable of hiding old work of inferior quality, or of concealing blemishes in new work. When employed with an exaggeration of relief, plastic paint quickly loses whatever charm it may have had, for it harbours dust which cannot be removed with ease. Texturing is done in many ways, comb, knife, stippler, brush, crumpled paper, canvas, and even the fingers or the palm of the hand being pressed into service on the still workable surface. The material, once set, lends itself to further enrichment by simple painting, or, when metallic paints are used with glazes, by exposing the metal of the high spots before the glaze has set.

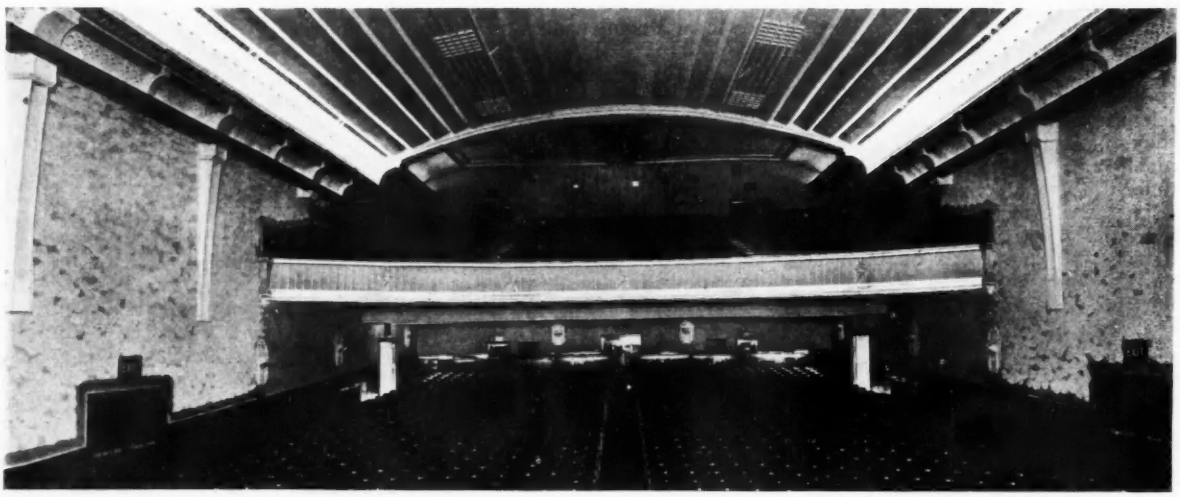
Akin to plastic paints are self-texturing paints in which mechanical action produces surface irregularities which vary in accordance with the mixing of the ingredients. Globules separate out with more or less freedom, and their behaviour during the process of drying may be controlled to some extent, thus producing changes in surface level which may either be picked out in different colours or painted in a single tone which will show up the texture.

Glazes can be manipulated to produce a variety of surfaces. They may be grained over suitable grounds to give the appearance of rich woods to baser materials, and here, as in all graining processes, restraint is the keynote of success. This applies also to the rubber stippler, a tool which is capable of producing visual illusions of great charm, though some of the forceful examples seen in exhibition demonstrations might lead the sensitive to disregard the more subtle range of a tool which is by no means despicable. In the main, broad, straightforward patterns or stipples are less irritating than those produced by twirling or super-imposition. Complication stresses the domination of the glaze and lends restlessness to all but the largest surfaces.

Much might be written on the improvements which have taken place in ordinary paints and distempers; but reference may only be made to the more important developments. Among these are satisfactory flat varnishes which are devoid of waxy stickiness, and flat enamels which are both durable and of truly matt surface. Both of these are most suitably employed in internal work, where they fill a long-felt want. In addition, it may be stated that there are now several glossy enamels made by well-known firms which dry hard in about eight or nine hours, and which, if applied to suitable undercoats, are entirely devoid of crazing or shrinkage defects. These are a great help where speed is important, for buildings painted overnight are ready for use next day.

New external finishes are legion. Most external distempers by reputable firms are reliable; but it is well to wait for a fine spell before applying them. The writer remembers with distaste the tribute which Nature once paid to the lasting qualities of one of these. Distemper overtaken by rain was washed on to a slate roof, from which nothing will remove it.

Some recent finishes give a coating which resembles stone, and may be used both externally and internally, either to disguise new plaster or concrete, or to patch up blemishes in old work. Again, these cannot be dealt with at length; but as they are not uniformly reliable, it is a good plan to insist on seeing work which has been standing for some time before specifying a similar product, a course which may be followed with profit in the use of new paint of any kind.



Capitol Cinema, Didsbury.] [*P. Cummings, Architect.*

Fibrous plaster and plastic paint were used throughout this cinema for decorative purposes. This view of the interior clearly shows the textured surfaces of the walls.

PLASTIC PAINT

NOISE AND ITS ABSORPTION

BY HOPE BAGENAL

The trend of modern materials towards lightness, thinness and surface hardness is one of the major causes of the increase in acoustic complaints. As our buildings become less massive, so they inevitably become more transparent to sound. The author surveys the expedients and materials available to combat this tendency.

LIGHTNESS of structure is often inevitable on the upper floors of modern buildings, but where rooms require special acoustic precautions, it is well to locate those rooms on basement or ground floor, and use dense bricks and mortar on their own separate foundations. It is no secret that the B.B.C., in their new building, are relying, *among other factors*, on an extremely thick brick wall to resist sound-transmission.

Modern partition-block makers should market a heavy block as well as a light block, and in a double partition wall both should be employed. I have not yet seen the principle of unequal density employed in a patent sound-proof partition, yet it is an obvious deduction from theory, since a sound capable of setting one weight of wall in motion as a tympanum is less likely so to set a different weight. In other words, unequal elements of a partition will not both respond to the same tone. Exactly the same principle holds in double windows, and advantage should be taken of it.

After the importance of density in sound insulation, experiments show that plastering a partition is an important factor; the thicker the plaster the better. When we come to plasters, there is not yet much sign of inclination on the part of ordinary plaster firms to meet the acoustic menace. The harder and more rapid setting, the worse the plaster, from an acoustic point of view; yet I am sent every week notices of plasters boasting of their diamond hardness and non-porosity. One firm only has sent me information of a cheap plaster for ordinary housing that claims to be less reflective, and therefore more comfortable to live with.

This is a matter of vital importance. Intolerable discomfort and wear of the nerves is caused every day by the wholesale use of the modern, rapid-setting, hard gypsum plasters, and a stand should be made against them. They cause "bathroom conditions" in quite small living-rooms; they cause the reinforcing of certain tones of the voice above others in dining-rooms; they make w.c.'s into box resonators; they act as thin sheath conductors from walls to floor, over the whole house. What is wanted today is the acoustic equivalent of the old thick lime and hair three-coat work.

Where gypsum plasters are used in housing schemes, they should be used on walls only, and the ceiling should be of a lime plaster or of a quilt and fibre board. A fibre board alone on a ceiling is not in my opinion sufficient defence against noises above, but there are fibre boards on the market that are guaranteed as giving a key for plaster, and a union of fibre board and gypsum plaster is better than plaster only. Generally speaking, fibre boards are more useful against sound-transmission in ceilings than in walls, because in ceilings they can also act as an anti-vibration course. A fibre board over the whole floor under the floor boards is always useful, and is inexpensive.

In modern housing at least one living-room should have a sound-absorbing ceiling, and this type of ceiling is also specially necessary in modern offices, committee rooms, and boardrooms. The gypsum plaster ceiling, reflecting 99 per cent. of the noise produced under it, *often makes impossible the locating of typewriters and telephones in the same apartment.*

For sound-absorbing purposes there are a variety of materials. First of all there are the perforated fibre slabs, the muslin-covered felt, and the canvas-screened quilt. None of these, however, can be used over panel heating, and, in a ceiling, must be located in a centre area with panel heating round the margin. On the other hand, acoustic plaster has been placed over panel heating, and, as far as I know, has been successful. Acoustic tiles and acoustic plaster are increasing in use, especially for school halls and churches. They are almost a necessity in a very large church or hall, and especially if loud-speakers are to function properly. They provide the only "masonry" absorbent surfaces. So-called acoustic paints and sprays are sold, which claim that they do not block up the pores of an acoustic plaster, but it is hard to see how they contrive not to do so; the small pores are just as important as the big interstices. The advantage of acoustic plaster is that it gives a continuous surface not broken up by butt joints or squares. Also it is fireproof. Asbestos-felt, muslin covered, fixed flat on a ceiling or wall, also gives a continuous unbroken surface and, having no air-space behind it, is permitted by the L.C.C.

A recent English sound-absorbent made of asbestos fibre, with or without perforations exposed, has also the great advantage of fire resistance, and is of a clean white colour. From a hygienic point of view a good absorbent is eel-grass behind perforated metal sheets enamelled white. The sheets can be washed or sprayed and make an absorbent ceiling for hospitals. Asbestos felt and strawboard can also be used behind perforated metal sheeting enamelled white. The perforated fibre slabs can also be distempered if the perforations are not blocked up, and, in addition, they are resonant when fixed on battens and can be used in concert halls and studios both as absorbents and resonators.

For public bath halls, where condensation has to be countered, there are two absorbents available, viz. acoustic tiles, and a new kind of sprayed asbestos used with success in dye works.

The strawboard slab of dimensions about 8 ft. by 4 ft. and about 2 ins. thick is a useful *omnibus* material from an acoustic point of view. It makes a good light double partition, especially when used in conjunction with a quilt. One element of the partition should be built first and carefully sealed by means of the quilt, then the second element of the partition should be built at a distance of an inch or two from the first. Finally, both faces should be plastered. This material can also be used as a centering for a concrete floor, and can be left in position owing to its lightness; it then presents an absorbent under-surface which can be screened either with canvas or perforated metal. The strawboard can also be laid down on a concrete floor as an anti-vibration course covering the whole floor, and can then be screeded over or can carry a wooden floor.

In cities where there is soot and dirt the problem of an absorbent surface that can be distempered and re-distempered is always presenting itself. A good solution of this problem is provided by the perforated fibre slabs already referred to. They are light and will glue up on the under-side of a screeded concrete or tile ceiling, and can be distempered and re-distempered *provided the perforations are not blocked up.* It would be well to brush the whole surface before re-distempering. The advantage of the perforated metal sheets, screening a soft absorbent, is that the perforated metal can also be

painted and repainted; it therefore makes a suitable ceiling surface for police courts, classrooms, clinics, etc.

The best "straight-line" sound-absorbents for cinema studios, wireless studios, gramophone recording rooms, etc., is 4 ins. of mineral wool behind some form of netting. This gives a curve resembling the absorption curve of an audience. Fibre boards have value for general musical purposes, but they are not fireproof and present, therefore, extra problems in connection with the L.C.C. regulations. An air-space behind is not permitted, but without the air-space they are not resonant and will not give the same absorption curve. The objection of the mandarins at the L.C.C. to an air-space behind panelling is a serious matter where concert-hall design is concerned. But would it not be possible to back a fibre board with a really efficient fire-resisting paint, fix it to narrow asbestos strips, and leave an air-space of only ½ in. behind it? This would avoid the necessity of backing the board solid on a plaster backing as now required.

Every acoustic firm should supply three things: namely, a thick absorbent having a decent appearance; a quilt or blanket for light-weight transmission purposes, and for caulking junctions of walls with floor and ceiling; and also a fibre board for use as a cheap wall absorbent and also as an anti-vibration course under floors where required. At present it is necessary to specify one proprietary article from one firm and another from another. Obviously, one article alone will not cure all possible acoustic complaints (although there are still innocent business men who believe that it will), but, instead, the various contributing causes require at least three different methods of remedy and each remedy a particular type of material.

LETTERS FROM READERS

Control of Elevations

SIR,—I have read with interest your leading article on the Control of Elevations in your last issue. The decision as to what is good and what is bad architecture is a matter of very small moment. The C.P.R.E. is a society that exists, I think, for one reason, i.e. the neglect of the look of things. As you say, cottages, factories and shops are subjects which appear to the people requiring them to be so unimportant that the ease with which they can be designed comes within the competency of the ordinary speculative builder, or a dilettante lady who says she knows what she wants, or a commercially-minded person who "doesn't care a d——n what it looks like."

I hope that in a few generations from now, culture in regard to these matters will have risen, so that discussions will be on questions of preference in artistic matters, and not whether or not thought shall be given at all to the look of things.

As you know, the town planning committees that have been set up are advised by an honorary architect. That this works well I can assure you from experience, except when unworthy proposals are made by other architects, who appear to think that this work of the preservation of the amenities of the country is all nonsense.

Until a town plan has been finally approved, it is difficult to avoid the promiscuous dumping of the odd house or bungalow in any position on any site, but where possible town planning committees should ask for a plan showing the development of the immediate neighbourhood when an odd building is proposed.

I appreciate very highly your remark that control can only be applied by the spontaneous moral force from all people desiring order. Until everybody wishes to avoid uglinesses, we shall not have approached the ideal condition. There should be no need for control; nobody should wish to neglect the look of things.

I am very glad that your JOURNAL can do, and is doing, so much to further the ends of the C.P.R.E., and to assist in producing the culture which is the only sound basis for keeping the country beautiful.

THOMAS RAYSON

Architectural Publicity

SIR,—As with Mr. Caulfield, Karshish has reminded me also of two architects who evolved schemes for cheap publicity. The first—a provincial man—conceived the bright idea of touring the town and dropping his visiting cards at 300-yard intervals in the streets. The lustre of this brilliant idea was somewhat dimmed by a frequent repetition of the manœuvre. The second gentleman habitually carried a small drawing-board and tee-square under his arm during his daily travels. It is rumoured that these objects reposed under his pillow when he slept, but the publicity value of this thoroughness is a trifle obscure.

It is with regret that I read of the sword and curtain falling together, in the last issue of the JOURNAL, on the pulsating human document of the inconsequences of a wife-driven provincial nonentity. I had looked forward to a further 500 instalments at least from the gossiping pen of Karshish.

J. R. LEATHART

Villa at Innsbruck

SIR,—Will you allow me to offer some brief observations upon Mr. Welzenbacher's "Villa in brick at Innsbruck," illustrated in your issue for Sept. 23?

The essence of this building appears to be that the designer (if that is the just expression) has built a decorated box. The mass of the building, in which design, by any reasonable canon, ought to rest, is not merely a box, but an ugly box. This ugliness is so apparent, even to the designer, that he has mitigated it with patterned bricks. Thus, how often we have seen an ugly figure smothered with ornament fondly believed to redeem that which cannot be amended.

I am moved to write these few words on the subject, and to ask you to publish them, because we have so many imitative architects, and I should not be in the least surprised to find a tee-square and set-square employed here to serve the same dreadful end. The thing is so easy to do. The New Barbarism marches across Europe, destructive of civilization, and having its origin in the same places as of old. The older Dark Ages, however, had not the assistance of the printing press.

L. CHIOZZA MONEY

Empire Timbers

SIR,—Regarding the article on "Empire Timbers," which appeared in the JOURNAL for May 27 last, the Queensland Forest Service is delighted to learn that British architects are advocating the wider use of timbers from this State, and this Department will gladly supply any information which architects might desire.

Recent experiments have shown that Queensland satinay (*Syncarpia Hillii*), red tulip oak (*Tarrietia peralata*) and rose mahogany (*Dysoxylon Fraseranum*) are excellent for parquet flooring, and have been so used in the new forest products showroom of this department.

Satinay has been specified by the Queensland Public Works Department for 63,500 superficial feet of flooring in the new Anzac Building, now being erected for the Queensland Government in this city. It was chosen on account of its close texture and hardness to withstand wear, and excellent finish. This timber is becoming very popular in Brisbane for indoor polished floorings and mouldings. Over fifty million superficial feet are available.

Rose mahogany was used for the parquet flooring of the new Commonwealth Bank, Brisbane.

Red tulip oak is a very common timber of the North Queensland jungles, and it is estimated that the present stand exceeds two hundred million superficial feet.

C. J. TRIST

(QUEENSLAND FOREST SERVICE, BRISBANE)

A NEW SPIRIT AND IDEALISM

BY S. CHERMAYEFF

OUT of the twentieth century—our times and their own particular conditions — there is growing a new spirit and idealism. The only works, therefore, and their creators, who can be classified within the term "modern" are those who have contributed to the expression of this spirit and those ideals which are peculiarly of our time.

This establishes that the work in any period tradition, excellent though such work may be, is not relevant or significant to modernism.

That such a new spirit exists can be observed in all the changes which are taking place around us, whether in the realms of science, economics or politics. Constant experiments in new methods establish beyond a doubt, even to the most sceptical die-hard, that new minds are being brought to bear on old and new problems alike with ever-increasing understanding and success.

These minds have been produced in this age all over the globe in cultured communities by the concerted influence and pressure of new conditions. They have created, in different countries with no direct social intercourse, at identical, or nearly identical, times, theories and practices in structure and arts which have a common denominator—spontaneous desires for expression have resulted in works measurable by a common standard.

These modern creations came into being in spite of obstructions and without being self-conscious contributions to this or that "ism," such and such a style. They do not come under any category other than that of "modern" in its true sense: expressing the contemporary spirit and achievement. All things in their time may have been modern.

All thinking people obviously realize that the twentieth century is but another stage in evolution. We do not claim a moral superiority, however more advantageously we may be equipped today for creative effort. On the contrary, we must live up to our predecessors' tradition of creating. The craftsmen of other days realized that this was the tradition of art.

Mr. Aldous Huxley wrote a short time ago that "tradition is the next best substitute for talent." Modesty would verge on stupidity if we believed ourselves to be unable to progress. This age cannot be satisfied to copy where conditions demand new things without precedent.

Extracts from a paper read by Mr. S. Chermayeff at Heal and Son's premises on October 26, last.

Although, measured by time, we are not far removed from our predecessors, we are not merely just distinguishable from the men of the nineteenth century; we are divided by the barrier of the Great War, and the changes it has brought about.

The post-war period can be described as the beginning of the age of applied science. Its various aspects have been developed and made appreciable and measurable by every member of the public. This development and application of science to all things to be encountered in the walks of everyday life is developing the consciousness of man and stimulating a more varied and wider demand on science to minister to his needs.

Exchange of ideas through easier international communication has established in everyone's mind, on his own particular scale, the need for an immediate solution of problems of work and leisure: the fulfilment of a desire for comfort and hygiene.

The continuous combination of these factors has stimulated scientific achievement towards expression in terms of economic and accessible productions.

This developed consciousness of man, and its increasing curiosity as to means of achievement, has stimulated invention. Increasingly subtle, we are getting a greater profusion of new materials. These, in their turn, demand new forms for expressing them.

The Coming of the Machine

Conversely, the new type of creative mind stimulates by its demands the discovery of new processes and fresh technique.

To make these accessible, man is being superseded in his average inaccuracy by machines in rationalized production in industry. These machines, accurate and fast, are mass-producing components of structure and all commodities which are rapidly raising the general standard of living.

These new implements of creation are emanating from different brains and are being controlled by different hands from those which in other times dealt with superstitions, extreme individualism and vanities. Rich patrons demand luxuries, expressed in the old tradition of handicraft.

If I may reiterate, therefore, the forces within this age have produced new talent and new channels for its expression. We cannot deny the existence of a movement all round us which is daily finding greater scope, and is gathering force with its growth.

Seen in architecture, in the interior equipment of public institutions and private dwellings, in advertising, painting, sculpture, literature and in every convenience that civilization is bringing nearer to all, these forces are finally being accepted as something which, perhaps only in its infancy in this country, can, nevertheless, not be overlooked, or, worse still, pigeonholed under some ridiculous label.

Significance of Modern Work

Those who would see the significance of modern work must see it as an expression of sanity, consciousness, mental and physical hygiene—in terms of usefulness primarily, which through architects and designers has achieved new standards of beauty in itself without meaningless borrowing of embellishments from other times, and without striving after preciousness and exclusiveness, which can only stimulate snobism.

New forms resulting from the solution of new problems are arrived at through the process of solving, and not from some preconceived idea of what the finished work should appear to be.

The designer of today, no matter what his speciality, must fulfil the requirements of all the wider demands made on him, but while having to be a conscious cultured man and technical exponent, he has a third and most important function, that of selector. This quality of selection is the undefinable quality of taste, of the artist. There are usually several equally efficient solutions of a problem. A selection has to be made.

Man has, or pretends to, an æsthetic sense. He reacts to beauty as well as to convenience. Therefore, the designer is an æsthetic arbiter.

The principal factors arising out of all these forces which give the impulse to modern creation is a general sense of organic unity of our times.

To bring down to a few simple terms or definitions the expression of these beliefs in all modern design:

a: Fitness for purpose, i.e., materials for a purpose and not for effect. *b:* Form and colour are *of* a thing and not on it. *c:* Decoration as such is desecration. Directness of expression is essential to fuller understanding. *d:* Simplicity is essential in a scientific age of complexities, if we are to retain our sanity.

The new art of simplicity, as I see it, will, in fact, produce such things and make them accessible to the average man's home, there to relieve the variety, which is itself becoming monotonous, of ingenious machinery, travel, advertising and pleasure, and their accompanying noise, which we cannot escape from outside our private lives.

Interior Equipment

To turn to interior equipment particularly, we have arrived at a point where all these considerations converge in one plain indication, which is that the furniture for today and tomorrow

must be strong, cheap and mass-produced, of good, simple and machine-dictated design. To serve the special and peculiar needs of our time a new style is evolving, a new furnishing "period" is opening before our very eyes. Small, simple, hygienic pieces are needed, and few of them: there is, today, no room for furniture that does not fulfil some real function in a way that needs least attention and work.

Parallel with these changes has been a growing respect for the machine on the part of designers and on the part of the public. They like machinery. Perhaps subconsciously, they appreciate the beauty of it. Machines are a part of their everyday life.

The old designers of furniture, fabrics and fittings were antagonistic to machinery or shy of it. It was supposed to be at war with craftsmanship. The result of their attitude was that machinery did without designers and its ghastly products ran amok over the face of the land. This encouraged the designers to stage the various period revivals and the art and crafty movement. All this is coming to an end. Modern designers are embracing machinery as a heaven-sent opportunity to multiply good design.

On the Continent, furniture of simple beauty and complete efficiency is mass-produced in standard forms by machinery. It enjoys enormous sales, and these in turn have effected further economies, so that the German and Scandinavian artisan can furnish completely, and in the best taste, very cheaply indeed. The modern æsthetic is therefore understood and established abroad. The position in England is one of transition.

In England, to a greater extent than anywhere else, the middle classes copy the rich. When the rich collected antiques, a demand sprang up among their followers for the sham antique. Now that every magazine and newspaper bears evidence that people of wealth have been converted to the modern æsthetic, the proletariat are turning as well.

Perhaps there is less sheer emulation this time and a clearer view of the practical issues involved. There remains, however, the same risk that in answer to their demand they will be fobbed off with wrong-headed imitations, unless the situation is saved in time.

We have obviously not yet achieved the final form and are only on the road to a simple direct art. We are now passing through experiments between the designers, trades, draftsmen, available machinery.

The crazes for a change which pickled, petrified, oak and limed it, forcing on old things the indignity of some grisly ritual of exhumation and vandalism, and, then, latterly, the illiterate manufacturer's fashion which has merely dressed old forms in new clothes—borrowing decorative motifs from all sources regardless of artistic or functional merit—have produced a procession of Elgin marbles dressed in top hats and petticoats all marked down as bargains.

I should like to go farther and say even that to my mind modern creation cannot be achieved any better through elimination than by additions. We are creating nothing by simplification of some classic form and adapting it to the economic necessities of our time. Those who believe that this can lead anywhere are making a vicious circle of evolution.

England seems to me to be in particular danger of not fulfilling its economic function in the work of today, by virtue of its achievement in the past. It should be justly proud of this, but not to the lengths of falling into a retrospective stupor. Unless we participate in the modern world movement and create appropriately, no tariffs or going off the gold standard will avail.

The Architecture of Today

"Modernism" has been exploited since the war like a milliner's fashion. That such significant arts as architecture and its equipment should be allowed to deteriorate and lose its significance through lack of understanding is unthinkable. Even if some ingenious charlatan in Paris persuades women back into bustles, let us, at all costs, not go back to Egyptian railway stations and Gothic petrol pumps.

AT THE R.I.B.A.

Dr. Unwin's Address

DR. RAYMOND UNWIN, P.R.I.B.A., in his presidential address at the Royal Institute on Monday, said that in the design of small dwellings there was such a close and intimate connection between the proportions of all the parts and the hourly life of the occupants as to constitute a new type of relationship, which, though not absent in the planning of more important buildings, seldom assumed there so determining and all-pervading a character as in the humble dwelling.

Co-operation of Specialists

In the widening sphere of relationships the designer became dependent on the help and advice of an increasing number of other experts: surveyors, engineers, sociologists, to mention only a few; and the success of the work became more and more dependent on their efficient co-operation. In regard to this there was still much to be learned. Specialization had its dangers as well as its advantages. It was, however, being forced upon us by the trend of progress; and we must seek to secure the benefits while avoiding the dangers. Co-operation, to be efficient and cordial, must be based on a mutual recognition of the special contribution which each had to make, and on a clear appreciation of the particular faculties and training which best qualified each specialist to play his part. He hoped it might be possible to make good progress on those lines towards cordial and helpful co-operation.

Replanning the Slums

He confessed that every visit paid to the East End of London roused in him the latent revolutionist. The time was surely ripe to tackle our slum problem on an adequate scale, to replan and rebuild our East Ends, for nothing less would be adequate. Brains and hands in excess of any requirements for the task were available, and their unemployed owners were receiving sums that would make a handsome contribution to the cost. Were we, as a people, really so devoid of resources and the power to organize, that year after year must go by with this vitally urgent task staring us in the face on the one hand, and on the other an array of available workers eating out their hearts, and consuming their maintenance in useless idleness?

One realized, in calmer moods at least, that there must be replanning before there could be sound reconstruction; that the power to plan must precede the planning; and that rehousing must be provided before there could be demolition. A few months ago it seemed that the necessary powers were to be provided; but, alas! the Town and Country Planning Bill had been lost in the recent political upheaval. He trusted the earliest possible opportunity would be taken to reintroduce it, and to give without further delay the much-needed powers to replan the old parts of towns, as well as to preserve the countryside.

The Architect and the Public

As attention passed from the individual building to more extended fields of planning, the wider range of connections brought into prominence the particular relationship between the designer and the beholder, between the architect and the public. Beauty was a very intimate and appealing quality. For its continued experience a relationship of understanding and sympathy must persist between the designer, who experienced the thrills of creative composition, and the many who might share the enjoyment which the quality radiated from those creations was

capable of kindling in the beholders. That quality, which we called beauty, we believed to be a very real thing; none the less so that it was not easy to define. Perhaps that fact need trouble us less in these days; for difficulty of definition was a deficiency now shared by many things the reality and even solidity of which all were willing to take for granted. Who today would venture on exact definition of matter or force? They remained none the less very real for all of us.

It was fully recognized that merely to speak of tradition and originality as complementary did not solve the problem of their relations, one of considerable difficulty in our time, because the continuity of tradition had been broken and its character was already confused. Nevertheless, by recognizing the complementary nature and mutual dependence of those influences, by seeking to understand the two principles, and to appreciate the points of view of those who stressed the one or the other, we were most likely to find the "Path," as the Indians called it. In learning more generally to understand the many links which connected buildings to their neighbours, or to their localities, and the mutual relations which should exist between architects and the public, we should be most likely to realize the limits within which in each case individuality or originality could legitimately let themselves go. Was not this, in another form, the great problem of our day? How to pass from the haphazard to the planned; how to secure co-ordination of effort while preserving individuality. The answer must be looked for on the lines of securing and defining by intelligent co-operation spheres within which individuality might have free play. The architect might be called to design the dominating building, or merely to plan a part of the background, to execute as it were the piano part in the concerto, or to play one instrument in the accompanying orchestra. Whichever it might be, the essential harmony or music would depend on the maintenance of a right proportion between all the parts.

The Great Emergence of Science

A most stimulating panorama of the great emergence of science had been unfolded for us recently by General Smuts, in his address to the British Association. He conveyed, even to the layman, a fascinating glimpse of that new unity which he began to discern in the universe, and to which the General in his well-known book gave the name of Holism. He described it as a tendency towards organization into ever more complete and more highly endowed wholes.

It was difficult to imagine any development of scientific thought more congenial to the artist or the designer. Instead of being daunted by the picture of a universe based on inexorable mechanistic laws, he now glimpsed a sympathetic universe, pervaded by the living principles and tendencies with which he was familiar in his life and his art.

Not only was our time inspiriting in the realm of thought, but equally in that of practice great things were doing. As planners we could hardly fail to be impressed by that gigantic adventure in planning on which the Russian people were embarked. We watched its progress with keen interest; and our sympathy for that people would not be the less because we might fear that its planning was too much based on that old mechanistic type of teaching from which we believed that science was already escaping. As architects, too, we must be thrilled by the daring character of many of the new buildings springing up around us; and fascinated by the heated discussions which they aroused. Terms like functionalism and traditionalism were flung about by the several protagonists with a vigour that proved architecture to be, if not a living art, at least a lively one!

The Uses of an Architect

IN his popular lecture at the R.I.B.A. on Saturday last, Mr. H. B. Creswell, F.R.I.B.A., said that he was speaking to the general public, and he proposed to explain what an architect was for, because there was general perplexity on the subject.

The public was bemused by architecture as represented in small houses much as inhabitants of Brixton were bemused by Regent Street shops or the owner of a motor bicycle and side car by a show-room of Rolls Royce cars. Not one in ten of the people who went to the Ideal Home Exhibition could aspire to owning the kinds of houses there shown, but many tastefully-informed magazines dealt with the subject, and it was evident there was a need for the public to understand that an architect was not a kind of colonel in the regiments of builders or a special cream of the building fraternity, but something very different.

Mr. Creswell went on to say that the question, "What is an architect?" was such a difficult one that the Royal Institute was unable to answer the question when it protested against Captain Fouke being employed to design the Exhibition buildings of 1862, and was asked it. All that could be said at this present time was that an architect was anyone who could persuade someone else to pay him for designing and directing the erection of a building, and that in two years' time, when the Architects Registration Act came into force, "architect" would mean "someone *not* qualified to design and supervise the erection of buildings."

For Mr. Creswell's purpose, however, an architect would be considered to be someone qualified to take charge of proper building—"building properly" being a good working definition of architecture. An architect was, therefore, someone who was a man of affairs, an engineer, and an artist. "Artist" did not mean someone who painted pictures. A tight-rope dancer was an artist. Mr. Creswell illustrated his point with an anecdote of an Irishman who was so imbued with the artist's impulse that when he saw an old man's bald head shining in the sun he was impelled to give it a good crack with his shillelagh.

Mr. Creswell referred to the claim made by some persons that they had been their own architects, and said that on those occasions he was always reminded—he did not know why—of Lord Kitchener. He did not know whether it was because Lord Kitchener had said, when Bantam Regiments were being enlisted, "Anyone who states that I object to Bantam Regiments is a liar"—he thought not; but he was, for some reason, always reminded of Lord Kitchener.

The lecturer spoke of the Reach-me-down house, and of Brickko, Slabbo, Coughoh and Sneezoh, and other patent materials used in its construction, and gave a word of warning against the looting of designs out of magazines, as this might lead to an action at law, and the payment of the architect's fees without the relish of having enjoyed his closer acquaintance. He said that it was usual for those who had decided to build themselves a house at once to make a plan and a picture or elevation of it, and he showed on the screen such plans and elevations, pointed out the ideas latent in the plan, but questioned the convenience of the game larder being inaccessible except from one of the reception rooms, and of having to go on all fours to get upstairs. One of the uses of the architect was to resolve these difficulties.

Mr. Creswell explained the ways in which people building houses selected their architect, and commented on them, and then went on to show on the screen the sort of house an architect might provide. The methods by which a contract with a builder was made and the house erected in accordance with the design was explained, and Mr. Creswell then said something of the responsibilities of the architect, which he illustrated by the Colonel R.G.A., who, after he had introduced the officers to the General inspecting the fort and had explained their various duties, replied to the question, "Well, and what do *you* do, Colonel?"—"I, sir, take the whole of the blame."

TRADE NOTES

MARBLE, mosaic and tiled floor coverings have been used from the earliest dates of which we are cognizant in connection with building construction. Parquet flooring may be seen in houses 400 and 500 years old on the Continent. Wood-block flooring, on the other hand, laid on a solid concrete foundation, does not date back beyond sixty or seventy years in any wide sense, and wood block flooring specialists, such as the Acme Flooring and Paving Co., of Barking, have made very great improvements in methods of seasoning and manufacture and of fixing during that period.

It will be apparent that wood-block flooring can be used where marble, terrazzo or tiled flooring cannot be considered. When the question of cost comes into consideration, it has, it is claimed, a considerable advantage as compared with cork or rubber, and if a suitable material is chosen, it is very durable and decorative. The better-class firms in the wood-block flooring trade today are specializing in home-manufactured materials, and very fine results may be obtained by the use of hardwoods, such as teak, Austrian oak, Australian jarrah, Tasmanian myrtle, Canadian maple, bagac, gurjun, etc.

The sub-floor should be of fine-screeded concrete, smooth and level. The blocks should be laid in a non-setting mastic which remains plastic at low temperatures. If the mastic is allowed to become brittle, looseness of the blocks occurs under the shock of traffic. The blocks should be bonded together by means of dowels, which ensure complete stability and evenness of surface under traffic without any loss of wearing life such as occurs with the tongued and grooved method. The floors, after being laid, are cleaned off to a smooth and level surface and, where a specially fine finish is necessary, polished. The usual thickness for hardwoods is 1 in. nominal, finishing $\frac{7}{8}$ in.

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The question of "safety first" for the foot-passenger, where plain concrete is used as a flooring finish, arises in particular as regards stairs, the margins of swimming-baths and banking halls, to mention but three cases at random. Many non-slip materials are available for mixing with the concrete, their essential ingredients being finely-divided steel chips, carborundum or similar abrasive substances. Three specialities of approved value for the purpose are "Alundum" (The Adamite Co.), "Betonac" (The François Cementation Co.), and "Duromit" (The Kleine Co.). In most instances these also confer hardness upon the floors in which they are incorporated.

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Ever since the introduction of reinforced concrete, the finish of concrete walls has been a subject for numberless experiments. A common method of covering the dead grey of the natural cement is to mix a pigment with a cement and sand rendering and to trowel it on, trusting for variety of tone to the intentionally uneven texture of the trowelling. Tintocrete is a new method which provides a hard, durable surface of neat cement, toned to any desired colour. It is applied by means of a high-pressure paint spray, the special preparation of the material enabling the cement to flow readily and imparting to it elastic and adhesive qualities that minimize the risk of cracking and crazing after setting. All that is required to ensure a good effect is care that the surface to be treated is reasonably free from grease or dirt. The process is equally suitable for treating either brickwork or concrete, and on the former material it gives a good texture, allowing the outline of the bricks to show through the thin cement coating, while at the same time rendering the wall waterproof. This should prove a useful treatment for buildings in exposed situations where only tar or cement stucco were really effective against driving rains. Tintocrete, with its range of colours, should be a welcome change from dull stucco or funereal tar.

The ideal backing for concrete work is a first rendering of waterproof cement and sand (three to one), finished with a wood float. With a very rough surface, a shot silk effect can be obtained by holding the spray at an acute angle with the wall and employing two different colours, one applied from the right and the other from the left. This treatment is suitable for interior decoration, and when red and blue cement sprays are used the wall will appear red on the left hand, blue on the right, and a rich purple where it is directly opposite to the spectator.

The simplicity of application and the variety of purposes for which the process may be used should render it popular with architects when it is better known.

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Cadmium plating is an up-to-date method of protecting steel windows. It is one thing to apply mechanically a protective skin to an article, but it is quite another matter to cause that skin to be deposited electro-chemically on the article so that the two are practically alloyed together. Such is the principle of the system now adopted by Helliwells in their cadmium-plating shops. The two metals are so closely intermingled that there is no chance of cracking, blistering or peeling, as paint is apt to do. Being comparatively dense and having a highly penetrative power, cadmium, properly applied, gives a very compact coating and insinuates itself into the smallest interstices. As the metal frame is treated cold, its original state is maintained, and no warping or distortion occurs.

When steelwork which has only been painted is scratched, corrosion starts and spreads under the paint. Cadmium-plated iron or steel articles, it is claimed, remain rustless even if scratched or abraded, the deposit upon them being electro-positive to iron or steel. Cadmium will also afford protection against alkaline or saline attacks. It will readily receive paint, especially if allowed to weather slightly.

It gives a pleasant appearance and is becoming increasingly popular as a protective agent in many directions, especially in the motor-car and aeroplane industries. Its use in the manufacture of metal windows is growing. Helliwells are one of the first of the makers of better-class steel windows to lay down their own plating plant. Before adopting it, very severe tests were made for them by an eminent London firm of consulting and analytical chemists, who reported that, in their opinion, a properly plated casement should remain free from rust in a normal atmosphere for at least five years. The extra cost of this plating is slight when compared with the advantages gained.

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One of the most popular decorative materials for external and internal use is Lap panels, which can be seen in three of London's newest theatres—the Cambridge Theatre, the Phœnix Theatre and the Victoria Cinema. Lap is a permanent material. It is not an imitation marble, but a pre-cast substance whose superficial characteristic resembles that of polished stone. It possesses a slightly translucent surface, which is claimed to be unaffected by atmospheric conditions, or any normal stain or bruise, and can be obtained in almost any colour or combination of colours, and can be produced in unique textures by incorporating powdered or leaf metals. It can be cast in many moulded forms—the process will produce or reproduce almost any pattern, colour and technique desired, and can be supplied in slabs of any size. The material has been used by such prominent architects as Sir John Burnet, Tait and Lorne, Messrs. Wimperis, Simpson and Guthrie, and Mr. Oliver P. Bernard. Lap is manufactured in England. The head office is at Palace Wharf, Rainville Road, Hammersmith, London, W.6.

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An ingenious new wall covering, comprising an extremely thin veneer of choice cabinet woods, such as walnut, mahogany, oak, etc., on a backing of canvas—the whole no thicker than a stout wall-paper—is now available in Flexwood. Like wall-paper, it can be applied to a variety of wall surfaces—plaster, metal, wood, or tiles—making nothing of small irregularities; moreover, it will round any corner, provided it is laid with the grain. Among the claims advanced for it are an economy of one-half to one-tenth as against the cost of ordinary wood panelling, and immunity from warping, shrinking and cracking. The surface is indistinguishable from solid woodwork, and, like all veneers, it lends itself to matching, by means of which rich decorative effects are attainable. It is prepared in lengths of 8, 9 and 10 ft., and widths varying, according to the wood, from 8 to as much as 36 ins. (walnut, plain mahogany and maple). Flexwood is marketed by the Merchant Trading Co., 52 Bishopsgate, E.C.2.

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Readers of the last issue of THE ARCHITECTS' JOURNAL (October 28) may have

noticed on the outside of the back wrapper of the paper the reproduction of an aerial view of the new "Britco" factory at Rothervale, by means of which they were advised that these works have just gone into the production of British-made doors. The announcement was very opportune on the eve of the appearance of an issue devoted particularly to new materials, which will, in effect, in the near future, for economic reasons, largely mean British or Empire materials. Britco is an all-British enterprise, engaged in the manufacture of Columbian pine doors on an extensive scale. Every door sold under this trade mark carries a full guarantee of replacement in the event of its developing any defect due to faulty material or manufacture. The factory has been laid down expressly to compete with the best imported mass-produced doors. The equipment includes a large battery of modern insulated drying kilns, and an initial output, susceptible of increase, of 300,000 doors per annum is contemplated.

The firm are to be congratulated upon the issue of an attractive first catalogue, giving admirably clear photographic illustrations of typical doors, of which no less than thirty-five sizes are listed, twelve of which are held in stock, the remainder being manufactured to special order and delivery. Architraves can be supplied to standard or special designs. The catalogue also gives particulars and constructive diagrams of redwood exterior doors, garage doors and gates; also of Britco stain, which is available in a range of shades. The Merchant Trading Co., Ltd., are the wholesale distributors.

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A record, it is claimed, in rubber-floor laying was recently set up at Madame Tussaud's, London. Beginning at ten o'clock sharp on Saturday night, October 17, fifteen workmen of Macinlop, Ltd., of Manchester, working in relays, completed the 375 square yards of flooring in the restaurant by half-past one on Sunday afternoon.

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Malenite Industries, Ltd., are marketing a new veneering process by means of which unique patterns can be readily produced by combinations of various woods. The possibilities of the process, as applied to fireplaces, furniture and panelling, can be seen in their showrooms designed by Oliver P. Bernard, at 21 Suffolk Street, Pall Mall, S.W.1.

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A pamphlet describing Marbolith, the new process floor incorporating Dermas asphalt emulsion, has just been issued by the Marbolith Flooring Co., Ltd., of 104 High Holborn, W.C.1.

It is stated that it had been realized for many years that if the twin problems of cracking, and the necessity for oiling, could be overcome, the usefulness of magnesite floors would be much increased. The solution was found, in great part, by the Shell-Mex Company. They produced in their research laboratories an asphalt emulsion which would mix with the ingredients of a magnesite floor, improving it in certain definite directions. This emulsion was patented under the name of Dermas. The emulsion, which is derived from asphalt, is present throughout the floor; of itself, it oils the surface, thus eliminating the only upkeep cost of jointless floors—constant oiling—and reduces to a minimum the risk of cracking. Other advantages claimed are (1) that since the surface is permanently oiled it will not "dust off" or powder, and (2) that the colour of the floor is maintained by the oil at its original freshness.

Marbolith flooring incorporating Dermas emulsion can, it is further stated, be treated and specified exactly as an ordinary jointless floor, i.e. it is laid *in situ*, on concrete, flagstones, brick or wood; it is claimed to be plastic in laying, and can be coved to walls and carried partway up them as a coved skirting or to form a dado; it is obtainable in a wide range of plain colours, mottled patterns and variegated effects, and it can be laid, if desired, with borders, insets and designs of contrasting colours.

The company, from whom samples of the flooring may be obtained, have opened a new branch office and works at Third Avenue, Trafford Park, Manchester.

*

In order to demonstrate the adaptability of Fosalsil partition blocks, the four-page inset advertisement, in colour, of the Moler Products, Ltd., in this issue, is devoted to descriptions of their use in four very different buildings, namely, Claridge's Hotel, Brook Street, W.1 (Oswald Milne, Architect); Cable House, Victoria Embankment, E.C. (Grace and Farmer and Sir Herbert Baker, Associated Architects); Southend General Hospital (Adams, Holden and Pearson, Architects); and a Hunting Box in Leicestershire (P. D. Hepworth, Architect). Fosalsil partition blocks, which are manufactured and supplied direct by Moler Products, Ltd., of 42 Kingsway, W.C.2, are claimed to be the lightest on the market — one-third the weight of ordinary blocks—with a crushing strength of no less than sixty-four tons per square foot.

*

Messrs. Mouldings Developments, Ltd., of 34 Victoria Street, S.W.1, are now marketing a new form of decorative sheeting under the registered name of Textamur. Made from pure, odourless materials, it is supplied in sheets, 55 ins. long by 24 ins. wide, and is 1 mm. thick. Owing to its unlimited range of colours, it can, it is claimed, be incorporated in almost any decorative scheme as a permanent panelling, either solus or faced on plywood or Celotex. The surface of Textamur can be washed and cleaned, and is also claimed to be fireproof and waterproof, unaffected by heat or frost, steam or damp, and immune from the attacks of vermin.

Triolin, the cellulose flooring, also supplied by Moulding Developments, Ltd., has, of course, been on the market for several years. It has been used for hospitals, cinemas, ships, restaurants, etc., and among the advantages claimed for this material is that its durability permits an extremely thin gauge to be used; that it goes down smoothly, and lies flat; joints are practically invisible, and soon after laying weld together, making one complete surface; and also that it will not buckle or creep, even on cement floors.

*

Among the many interesting specialities of Messrs. Nettlefold and Sons, Ltd., of Nettlefold House, 163 Euston Road, London, N.W.1, are Semprax cast stainless steel and the Marbelle water tap. Semprax is the name given to solid castings in stainless steel. The castings are naturally durable and take a high polish. Practically any article which can be cast in brass can also be cast in Semprax, provided it is not of too ornate a description. The Marbelle water tap has been devised by Messrs. Ebonestos Insulators, Ltd., of London, who are sole manufacturers under licence, from a moulding and not from a tap manufacturers' point of view. The mouldings consist of three parts—the handle, the top cover and the bottom cover and outlet, the latter part being moulded in one piece. By a special process, the bottom cover and outlet part is permanently fixed on to the brass cock in a manner which definitely prevents any leakage between the brass cock and the moulded exteriors. The top cap and capstan are easily removable to facilitate the replacement of washers, etc. The brass cocks upon which the moulded parts are fitted are manufactured by a leading tap manufacturer, and the whole tap is manufactured in accordance with the specification issued by the British Water Association. Messrs. Nettlefold and Sons, Ltd., have the sole selling and distributing rights, and all inquiries must be sent to them. The taps at the moment can be supplied in white, black, black mottled and green mottled, and are made in two sizes—$\frac{1}{2}$-in. and $\frac{3}{4}$-in. pillar.

*

From the Pyrene Co., Brentford, particulars are to hand of interesting patented processes for providing iron and steel articles with (1) a rust- and corrosion-proof surface ("Parkerizing"), or (2) a bonding surface for the subsequent application of paint or enamel ("Bonderizing.") Whereas in many rust-proofing processes zinc is the active agent, reliance is here placed upon the formation upon, and actually penetrating within, the surface of the article to be treated, of a coating of insoluble phosphates, which are, it is claimed, practically impervious to all the ordinary agents of corrosion.

The method of working both processes is similar. The proprietary powders, "Parco" or "Bonderite," are made up into solutions with boiling water, in which the articles to be treated, after being de-greased, are immersed for periods of about sixty or ten minutes, respectively. It is noteworthy that

as the temperature applied to the iron or steel is only the negligible one of boiling water, no change whatever affecting the temper of the metal can occur. It is claimed, in addition, for Parkerizing that the process is a conversion of the original surface rather than a building up of an additional outer skin; the limits and tolerations of machined surfaces are not sensibly affected, so that fine screw threads, for instance, can be processed without impairing the accuracy of their fit. Magnets, too, retain their magnetism; in fact, none of the physical properties are changed. The process gives a variety of attractive satin finishes, black.

Bonderizing is essentially a method of priming steel and iron. The effect of the treatment is said to be so complete that even if the surface so treated, and subsequently painted or enamelled, sustains scratches, rust will not spread from the injuries beneath the final finishing coats, and cause them to flake off. Exceptional cohesive properties and a chemically clean surface for the application of the final enamels are among other advantages offered.

*

It is stated by Messrs. Redalon, Ltd., of Regent House, Regent Street, London, W.1, that the inclusion of the words "Supply and fix Bull Dog Floor Clips" will make the difference between a floor comfortable and silent to walk on, or one liable to buckle and creak. The "Bull Dog" method is claimed to be quick, simple and efficient. To place the clips in position, a plank is laid over the green concrete across which the workman walks, using it as a guide for the alignment and spacing of the clips. The ears of the clips lie flush with the concrete, leaving the floor unobstructed and free for the trucking or storage of goods until the wood floors are ready to be laid. The floor fillets are dropped into position between the ears of the "Bull Dog" clips. (This holds them secure while the carpenters are levelling up.) A few wedges under the low spots, two special friction tight nails through each ear of the "Bull Dog" clips, and the job is done. It is also the contention of the firm that a plaster or cement rendering should be "part and parcel" of the concrete to which it is applied—not a separate coating keyed here and there. They claim that hacking or otherwise mechanically roughing the concrete provides a key over 25 per cent. of the area at the most, and that the process of hacking jars the concrete and may loosen the surface aggregate, making the bond of even less value than represented by the 25 per cent. of bonded area. To overcome these difficulties, the firm recommend the use of "Redalon" liquid, which is claimed to provide a natural key over the whole surface without damaging or weakening the concrete.

*

Messrs. J. H. Sankey and Son, Ltd., whose head office is at 124 Barking Road, S.E., inform us that they have been appointed selling agents for Maftex insulating board in London and the southern counties.

*

"Norusto," manufactured by Solignum, Ltd., 205 Borough High Street, S.E.1, is primarily a metal preservative paint, and is specially manufactured for the protection of all metal surfaces such as iron, steel, corrugated sheeting, etc., against rust. It is stated to have a covering capacity of about 900 square feet per gallon, and therefore to be very much more economical than ordinary paints, a comparatively small quantity being required to cover a large area. In view of this high covering power and its low cost, it is said to be considerably cheaper in actual use than most paints. Elasticity, durability and special preservative properties are claimed for it. Norusto, while being primarily a metal preservative paint, is also ideal for use on walls, concrete, cement, asbestos sheeting and similar surfaces, and is, it is stated, excellent for the treating of damp walls of houses. It is available in a range of colours, including black, white and aluminium; there are also special varieties of black for rapid-drying, dipping, heat-resisting and tanking uses.

*

To meet cases where modelling in comparatively high relief on walls, etc., is desired, Messrs. Winsor and Newton, Ltd., of Rathbone Place, W.1, have recently introduced "Wallart." This plastic medium is stated to be capable of being modelled to a thickness of 4 ins. without cracking, and to dry quite hard—hard enough, in fact, to be freely carved without chipping—while retaining sufficient elasticity to safeguard it against changes of temperature. Among other advantages claimed for it are acoustic properties, non-conductance of heat, and ready applicability to such surfaces as wood, plaster, glass and suitably prepared brickwork. It readily takes oil paints, and thus lends itself to varied decorative and colour schemes.

*

Messrs. Venesta, Ltd., are getting together technical information on methods of using Plymax in the building industry. This information they are sending out periodically in the form of photographic reproductions of work done with Plymax, and technical diagrams regarding fixing methods together with data on costs and so forth.

They are also forming a special department that will be organized to give technical service on all Plymax and Plywood buildings and decorative problems. The organization will be known as the Venesta Technical Department.

*

To deaden noise and to maintain an even temperature in their new premises, the Thompson and Norris Manufacturing Co., Ltd., decided to line the interior with insulating wallboard. An interesting feature of the scheme was the treatment of the pilasters on the side of one of the rooms. The wallboard used was Treetex, which was fixed to the walls on battens. The work was carried out with great rapidity.

THE ARCHITECTS' DIARY

WEDNESDAY, NOVEMBER 4

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "St. Peter's Cathedral and the Vatican, Rome." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of members' holiday sketches and photographs.

THURSDAY, NOVEMBER 5

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C. 1, "Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A.

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Metalwork as a Method of Enriching Furniture." By Seymour Lindsey. **7.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Eastern Chapels in the Cathedral Church of Norwich." By the Very Rev. the Dean of Norwich, F.S.A. **8 p.m.**

FRIDAY, NOVEMBER 6

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "The Roman Empire." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, NOVEMBER 7

Sunrise, 7.1 a.m. Sunset, 4.26 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Third of five non-technical lectures on Present-day Architecture. "Designing the Garden." By G. A. Jellicoe, A.R.I.B.A. **3 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to W. W. Howard & Co.'s Wharf, Canning Town. **2.45 p.m.**

TUESDAY, NOVEMBER 10

KING'S COLLEGE, Strand, W.C.2. Fifth of nine public lectures on Gothic Art. "Sculpture: 1140–1250." By Rev. Dr. Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Notes on Ventilation." By T. C. Noble, B.A. 7 p.m. Manchester and District Branch. At the Engineers' Club, Albert Street, Manchester. "A Summary of Modern Heating Systems." By W. P. Ollett. 7 p.m. **7 p.m.**

ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "The L.C.C. Drainage Bye-laws." By Lt.-Col. W. Butler, M.B. **6 p.m.**

WEDNESDAY, NOVEMBER 11

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Palaces and Churches of Venice." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C. 2. "The Planning and Lettering of Public Notices and Signs." By George Mansell. Chairman: The Mayor of Westminster. **8 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Hereford Bridges." By G. H. Jack, F.R.I.B.A. **6 p.m.**

THURSDAY, NOVEMBER 12

SCIENCE MUSEUM, (Lecture Theatre), South Kensington, S.W. 7. "Sheet and Plate Glass." By R. S. Taylor. **4.45 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Ancient Coffers and Cupboards." By Fred Roe, R.I. **7.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Hardwoods." By Alexander Howard. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, NOVEMBER 13

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "The Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, NOVEMBER 14

Sunrise, 7.13 a.m. Sunset, 4.15 p.m.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. London and Home Counties Branch. Visit (afternoon) to the Grand Priory in the British Realm of the Hospital of St. John of Jerusalem, Clerkenwell.

MONDAY, NOVEMBER 16

R.I.B.A., 9 Conduit Street, W.1. "Modern European Architecture." By H. S. Goodhart-Rendel, F.R.I.B.A. **8 p.m.**

WEDNESDAY, NOVEMBER 18

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Later Renaissance in Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The R.S.A. Competition of Industrial Designs, 1931." By P. H. Jowett, A.R.C.A. Chairman: Arthur J. Davis, F.R.I.B.A. **8 p.m.**

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BATTERSEA B.C. proposes to proceed with the erection of the second block of tenements on the St. John's College site, at a cost of £35,700. Fifty tenements are to be provided.

Mr. Gervase Bailey is to reconstruct 18–20 Cullum Street, CITY OF LONDON.

The CROYDON Corporation is to erect a pumping station for the drainage of the Ham Farm estate, at a cost of £5,000.

The CROYDON Corporation proposes to proceed with the new fire-station scheme in Long Lane, at a cost of £20,000.

The CROYDON Corporation has prepared a clearance scheme for the Old Town area and agreed upon re-housing for 526 persons in 100 houses on the Waddon estate, and for fifty-four persons in two blocks of flats in Windmill Road.

The CROYDON Corporation has approved plans for the erection of eighty houses on the Ham Farm estate.

Plans passed by the CROYDON Corporation: Nine houses, Orleans Road, for Mr. M. D. Wilde; two houses, The Glade, for Mr. F. S. Pym; alterations and additions, 9–11 London Road, for Mr. H. F. Bailey; two houses, Warminster Road, for Messrs. W. A. Telling, Ltd.; church and vicarage, Bingham Road and Sefton Road, for Messrs. W. Downs, Ltd.; four houses, Devonshire Way, for Mr. E. A. Parks; three shops, Selsdon Road, for Mr. R. K. Kruse; two houses, Haling Park Road, for Mr. S. H. Palmer; ninety-five houses, Stanford estate, for Messrs. Truett and Steel, Ltd.

The COULSDON U.D.C. has passed amended plans, submitted by Mr. R. Cromie, for the erection of a cinema and café in Brighton Road, Purley.

Plans passed by the COULSDON U.D.C.: House, Coulsdon Road, for Messrs. J. Kent and Sons; house, Stonetfield Road, for Messrs. Chittenden and Simmons, Ltd.; house, Woodplace Lane, for Mr. W. Farmer; house, Coulsdon Common, for Mr. S. G. Rudd; extensions and alterations, 152 Brighton Road and Valley Road, for Messrs. Hooker and Rogers; five houses, Byron Avenue, for Mr. C. L. G. Morgan; house, The Wend, for Messrs. Thomas and Son; two bungalows, Shirley Avenue, and two houses, Homefield Road, for Mr. T. C. Sales; eight bungalows, Wyncote Road, for Messrs. James and Woodworth, Ltd.; house, Caterham Drive, for Messrs. H. Turnbull & Co.; premises for Woolworths, Chipstead Valley Road, for Mr. Edgar R. Taylor; four houses, Hartley Way, for Mr. F. A. Freeman; house, Bradmore Way, for Mr. H. C. Dodrell.

The EAST HAM Corporation has obtained sanction to proceed with the erection of a nursery block at the children's homes, at a cost of £21,000.

The EAST HAM Corporation has obtained a grant for the extension of the central baths, at a cost of £18,000.

Plans passed by the EAST HAM Corporation: Five houses, Flanders Road, for Mr. H. Joseph; store, Cairn Mills, Silvertown, for Mr. E. A. Bateman; alterations, St. Edmund's Church, Katherine Road, for Mr. P. C. Boddy; alterations, 584 Romford Road, for Mr. H. N. Barnes; alterations, Labour Club, Katherine Road, for Mr. E. Meredith; three houses, Elsenham Road, for Mr. S. W. Bedford.

The POPLAR B.C. has approved plans for the erection, by direct labour, of forty-eight flats, two cottages and twenty shops on the Cubitt Town estate.

Plans passed at PURLEY: House, Hartley Old Road, for Mr. G. T. Fox; house, Northwood Avenue, for Mr. T. A. Parker; four houses, Famet Avenue, for Messrs. E. T. Brown and Son; two houses, Manor Wood Road, for Messrs. R. D. Taylor, Ltd.; two bungalows, Hayes Lane, for Mr. W. Butler; house, Sulver Lane, for Messrs. Wills and Kaula; two houses, Downlands Road, for Mr. P. Richardson; house, South Border, for Mr. G. W. Edser.

Plans passed at SANDERSTEAD: Fifteen houses, Purley Downs Road, for Messrs. Thomas and Son; two houses, Lime Meadow Avenue, for Messrs. Hooker and Rogers; house, Purley Downs Road, for Mr. H. P. Hawkes; house, West Hill, for Mr. W. Ernest; bungalow, Selsdon Vale, for Mr. M. G. Sharp; house, Farleigh Road, for Mr. A. I. Turner; house, Court Avenue, for Mr. E. E. Holder; bungalow, Kingswood Way, for Messrs. D. Garner and Son; house, Purley Bury Close, for Messrs. W. J. Frewing and Sons, Ltd.; house, Beech Avenue, for Mr. E. Bates; house, Churchway, for Mr. H. G. Rodda; bungalow, Old Farleigh Road, for Mr. S. T. Hipwell; house, Blacksmiths Avenue, for Messrs. Hooker and Rogers; development, Rectory estate, for H. Holoday Williams and Partners.

The SOUTHWARK B.C. is negotiating for a site in Austral Street for a housing scheme.

Plans passed by the SOUTHWARK B.C.: Shop, 64 Camberwell Road, for Mr. F. T. Dear; reconstruction of premises in Vine Street, for Mr. C. G. Fortune; additions, 159–163 Southwark Bridge Road, for Mr. A. E. Russell; building, site of 29–33 Empress Street, for Messrs. Riley and Glanfield; rebuilding "Gladstone" public-house, Lant Street, for Mr. W. G. Ingram.

SOUTHERN COUNTIES

The BEXHILL Corporation has approved the layout of the Broadoak Farm housing estate.

Plans passed by the BEXHILL Corporation: Alterations, Metropolitan Convalescent Institution, Cooden Sea Road, for Messrs. Rowland Plumbe and Partners; block of flats, De La Warr Parade, for Mr. F. W. Dark.

The BOURNEMOUTH Corporation is acquiring 11 acres of land at Talbot village, for a housing scheme.

Messrs. Hankinson and Son are to erect an hotel, shops, etc., and extension of the existing coach station for Messrs. Chambers, Ltd., in Bourne Avenue, BOURNEMOUTH.

Plans have been lodged with the BOURNEMOUTH Corporation by the Hants Land Society, Ltd., for the erection of a cinema at the corner of Queensland Road and Christchurch Road.

Plans passed by the BOURNEMOUTH Corporation: Alterations, 72 Poole Road, for Boots (Southern), Ltd.; extensions, Club, Holdenhurst Road, for Meyrick Golf Club, Ltd.; alterations and additions, Girdon Hotel, Southborne, Overcliff Drive, for Mr. W. G. Gubbins; alterations and additions, Primitive Methodist Church, Curzon Road, for the trustees; three shops and flats, Cardigan Road, for Messrs. Harrocks, Ltd.; alterations and additions, 382–6 Holdenhurst Road, for Co-operative Society, Ltd.; twelve shops, Richmond Hill, for Mr. R. Ives; four houses, Tuckton Road, for Mr. E. W. Patrick; three houses, Norton Road, for Mr. E. Carpenter; two houses, Meon Road, for Mr. F. Durrant; three bungalows, Newcombe Road, for Mr. S. Kermode; three houses, Winsley Avenue, for Mr. A. Bedford; four houses, Withermoor Road, for Mr. F. Rickets; shops, offices, etc., Bourne Avenue, for Melford Lodge Syndicate; two houses, Kingswell Road, for Mr. L. Saunders; two houses, Ensbury Avenue, for Mr. F. F. Hawkins; four houses, Winston Road, for Mr. J. Cole; four houses, Athelstan Road, for Mr. D. A. Wood; hotel, etc., Bourne Avenue, for Messrs. Richmond Chambers, Ltd.; business offices and flats, Richmond Hill, for Mr. R. F. Seward; two houses, Broadlands Avenue, for Mr. T. O. Barrett; two houses, Stanley Road, for Mr. A. Aston; theatre, Westover Road, for Bournemouth and Southern Theatres, Ltd.

Plans passed by the BRIGHTON Corporation: Extensions, 48 London Road, for Messrs. George Mence Smith, Ltd.; eighty houses and four shops, Widdicombe Way, Bevendean, for Messrs. Braybons, Ltd.; church, King Charles Avenue, Woodingdean, for Mr. S. Etheridge; four houses, Carden Avenue, for Mr. A. G. Lower; village hall, Woodingdean Road, Ovingdean, for Mr. S. Milson; reconstruction, 94–101 London Road, for Brighton Equitable Co-operative Society, Ltd.; five houses, Hillingdean Terrace, for Messrs. Wallis and Paris; four houses, Stanmer Villas, for Mr. W. H. Fuller; alterations and additions, 145 North Street, for Prudential Assurance Co., Ltd.; two houses, Winfield Avenue, for Mr. P. Wilson.

The HERNE BAY U.D.C. proposes the purchase of land at Grafton Rise for the erection of thirty-one houses.

NORTHERN COUNTIES

The BLYTH Corporation is to negotiate for land on the Thoroton estate for the erection of fifty houses; and for land at Bebside, for the erection of fifty houses.

Plans passed by the BOLTON Corporation: Two houses, Chorley Old Road, for Mr. J. W. Jones; house, Knowsley Road, for Messrs. T. P. Smith, Ltd.; workshop, Cope Bank, for Mr. D. Rostron; development land at Plodder Lane, for Bridgewater Estates, Ltd.

The BOLTON Corporation has approved plans for the erection of 265 bungalows, houses and shops on the Cameron Street estate.

Plans passed by the CARLISLE Corporation: Six houses, Thorneyflatt estate, for Mr. S. Mann; two houses, Thorneyflatt estate, for Mr. S. W. B. Jack; showrooms and office additions, Lowther Street, for Mr. H. Foxall; house, Orton Road, for Mr. H. E. Scarborough; shop, Scalegate Road, for Mr. Blackburn.

The West Riding Education Committee has purchased land in Wheldon Road, CASTLEFORD, for the erection of a nursery school.

The West Riding Education Committee is to proceed with the erection of a senior school at DINNINGTON, at a cost of £28,800.

The HULL Education Committee is to negotiate for the acquisition of 26 acres of land for the erection of new Grammar School buildings.

The HULL Corporation has obtained sanction to proceed with the erection of a further fifty-eight houses in Endyke Lane.

Plans passed by the MANCHESTER Corporation: Church at Kingsway, Didsbury; cinema, Rochdale Road and Victoria Avenue, Blackley; reconstruction of Café Royal, Peter Street and Bootle Street.

The MANCHESTER Education Committee has obtained sanction for the following works: Extension of Mill Street central kitchen, £2,890; erection of nursery school at Palmerston Street, £13,700; erection of Ladybran senior school, £45 000; erection of Collyhurst school, £16,000; erection of Old Moat senior school, £44,000; New Moston school extensions, £17,000.

The West Riding Education Committee has prepared revised plans for extensions at the MORLEY technical institute, at a cost of £1,400.

The SHEFFIELD Education Committee is to erect elementary schools at Wooley Wood for 480 pupils; and at Hatfield House Lane, for 1,000 pupils.

The STRETFORD U.D.C. has had plans prepared for the construction of a swimming bath, paddling pools and dressing accommodation in Longford Park.

The WAKEFIELD Corporation is seeking sanction for the erection of a further 100 houses, by direct labour, on the Eastmoor estate, at a cost of £40,000.

The Rev. Canon Leteux is to erect a junior and infants' school on the Lupset estate, WAKEFIELD.

The WAKEFIELD Education Committee has selected a site on the Eastmoor housing estate, for the erection of an elementary school.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
A	Aldeburgh ..	E. Counties	1 2½	11
C	Altrincham	N.W. Counties	1 6½	1 2
B	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A2	Atherstone	Mid. Counties	1 5	1 0½
B2	Aylesbury ..	S. Counties	1 3	11½
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0½
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A2	Bewdley ..	Mid. Counties	1 5½	1 1½
B2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0½
A2	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B1	Bridgwater	S.W. Counties	1 3½	11½
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B1	Brixham ..	S.W. Counties	1 3	11½
A2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0½
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A2	Crewe ..	N.W. Counties	1 5½	1 1½
A2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11½
A2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11½
A2	Driffield ..	Yorkshire	1 5	1 0½
A2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0½
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	*1 5½	1 1½
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0½
A2	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1½
A2	Goole ..	Yorkshire	1 5½	1 1½
A2	Gosport ..	S. Counties	1 5	1 0½
A2	Grantham ..	Mid. Counties	1 5	1 0½
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11½
A2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0½
B2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1½
A2	Kidderminster	Mid. Counties	1 5½	1 1½
B2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11½
A2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0½
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1½
B2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A1	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0½
A2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0½
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11½
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1½
A2	Skipton ..	Yorkshire	1 5½	1 1½
A2	Slough ..	S. Counties	1 5	1 0½
A2	Solihull ..	Mid. Counties	1 5½	1 1½
A2	South'pton	S. Counties	1 5	1 0½
A2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0½
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1½
A2	Wellingborough	Mid. Counties	1 5½	1 1½
A1	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1½
A2	Worksop ..	Yorkshire	1 5	1 0½
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0½
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 9
¾" Crushed Ballast . . . . . ,,	10 0
Building Sand . . . . . ,,	10 6
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¼" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R at Nine Elms:	s. d.
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . ,,	5 10 0
Hips and valleys . . each	9½
,, hand-made . ,,	10
Nails, compo . . . lb.	4
,, copper . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's . . ,, ,,	5
,, 2nds . ,, ,,	4
Mahogany, Honduras . ,, ,,	1 3
,, African . ,, ,,	1 1
,, Cuban . ,, ,,	2 6
Oak, plain American . ,, ,,	1 0
,, Figured ,, . ,, ,,	1 3
,, Plain Japanese . ,, ,,	1 2
,, Figured ,, . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . ,, ,,	1 11
Pine, Yellow . . ,, ,,	1 0
,, Oregon . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . ,, ,,	2 3
,, French . ,, ,,	2 1
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . Sq.	1 1 0
,, 1" . . ,,	1 3 6
,, 1¼" . . ,,	1 5 6
,, 1½" . . ,,	1 11 0
,, 2" . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . ,,	17 6
,, 1¼" . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . ,,	1 0 0
,, 1¼" . . ,,	1 8 0

Plywood, per ft. sup. Thickness	¼"	⅜"	½"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –
Oregon Pine	5 4 –	5½ 5 –	6 – –

	½"	⅝"	¾"	1"	1½"	2"
	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	5 4 3	7½ 6 4½	8½ 7 6	10½ 8 7	1/2½ 10 –	1/5 – –
Alder .	5 4 3	6½ 5½ 4½	8 7 6	9½ 8 7	11½ 10 –	1/3 – –
Gaboon Mahogany	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –	1/3½ 11 –	1/8½ 1/4 –	2/3 1/9 –
Figured Oak 1 side	10 8 –	11½ – –	1/6 – –	1/8½ – –	2/3 – –	2/10 – –
Plain Oak 1 side	7½ 7 –	9½ – –	1/0 – –	1/3 – –	1/7½ – –	2/2 – –
Oregon Pine	5½ 5 –	6 – –	– – –	– – –	– – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/11	2/8	4/9	
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9			
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–			
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3			
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6			
Bends . . . ,,	8	11	1/7½	2/7½	5/2			
Springs not socketed ,,	5	7	1/1½	1/11½	3/11			
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–			
Elbows, square . ,,	10	1/1	1/6	2/2	4/3			
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1			
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6			
Plain sockets and nipples ,,	3	4	6	8	1/3			
Diminished sockets ,,	4	6	9	1/–	2/–			
Flanges . . ,,	9	1/–	1/4	1/9	2/9			
Caps . . . ,,	3½	5	8	1/–	2/–			
Backnuts . . ,,	2	3	5	6	1/1			
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6			
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–			

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	. 50
Water . . . 58½	,, water	. 45
Steam . . . 55	,, steam	. 40

FITTINGS.

Per cent.		Per cent.
Gas . . . 57½	Galvanized gas	. 47½
Water . . . 52½	,, water	. 42½
Steam . . . 47½	,, steam	. 37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 0
,, ,, ⅞" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets. . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

	5" s. d.	6" s. d.
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	20 0
,, drawn pipes . . . ,,	20 6
,, soil pipe . . . ,,	23 6
,, scrap . . . ,,	10 0
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0	to 1 3
,, ,, 2 . ,,	1 2	,, 1 7
,, ,, 3 . ,,	1 7	,, 2 5
,, ,, 4 . ,,	2 1	,, 2 11
,, ,, 6 . ,,	2 3	,, 3 2
,, ,, 8 . ,,	2 6	,, 3 6
,, ,, 12 . ,,	2 9	,, 3 8
,, ,, 20 . ,,	3 0	,, 3 11
,, ,, 45 . ,,	3 3	,, 4 1
,, ,, 65 . ,,	3 7	,, 4 6
,, ,, 90 . ,,	3 10	,, 4 0
,, ,, 100 . ,,	4 0	,, 5 0
Vita glass, sheet, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, over 15 . ,,		7 6
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay add	,,	1 0
If in underpinning ,,	,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
3″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
¾″ do.	,,	3 4 0
½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1¼″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 16 6
Do. in flashings	,,	1 19 0
Do. in covering to turrets, etc.	,,	2 6 0
Do. in soakers	,,	1 12 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1¼″ s. d. 2 8	2″ s. d. 3 8	4″ s. d. —
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—
4″ cast-iron ½-rd. gutter and fixing						F.R.	1 3
Extra, only stop ends						Each	1 0
Do. angles						,,	1 6
Do. outlets						,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on						F.R.	1 6
Extra, only for shoes						Each	2 6
Do. for plain heads						,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh	Y.S. 3 9
Do. in n/w to beams, stanchions, etc.	,, 5 6
Lathing with sawn laths to ceilings	,, 1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,, 2 6
Do. vertical	,, 2 9
Rough render on walls	,, 2 3
Render, float and set in lime and hair	,, 3 0
Render and set in Sirapite	,, 3 3
Render, backing in cement and sand, and set in Keene's cement	,, 4 6
Extra, only if on lathing	,, 9
Keene's cement, angle and arris	F.R. 8
Arris	,, 3
Rounded angle, small	,, 3
Plain cornices in plaster, including dubbing out, per 1″ girth	,, 2
1″ granolithic pavings	Y.S. 5 0
1½″ ,, ,, ,,	,, 6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,, 1 2 6
9″ × 3″ ,, ,, ,, ,,	,, 1 7 0
Extra, only for small quadrant angle	F.R. 9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	,, 1 0
Arctic glass and glazing with putty	,, 1 2
Cathedral glass and do.	,, 1 3
Glazing only, British polished plate	,, 8
Extra, only if in beads	,, 2
Washleather	F.R. 4

PAINTER

	s. d
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	,, 1 0
Do. with washable distemper	,, 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,, 3 3
Do. on woodwork	,, 3 6
Do. on steelwork	,, 3 0
Do. and brush grain and twice varnish	,, 5 6
Stain and twice varnish woodwork	,, 1 11
Stain and wax-polish woodwork	,, 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 6
Hanging ordinary paper	from ,, 3 0

SELECTED PRECEDENTS:

INSIDE AND OUTSIDE THE POWER HOUSE (continued)

"ORDER is heaven's first law." The vandals of the nineteenth century, much preoccupied with heaven in other respects, will be remembered for the titanic scale on which they violated it. Their fatal heritage of chaos and meanness, which is eating into civilization like a canker, was the result of uncontrolled industrialism. It is the mission of our age to civilize industrialism, and to transform those degraded mining-camps, for which the description "manufacturing areas" is a derisive euphemism, into exemplars of "order where disorder stood."

Most of our "super-power stations" are superlative in their ugliness. There is no reason why they should be, as a glance abroad shows; nor why almost all English examples should be cautionary ones. The Central Electricity Board has immense imaginative opportunities and immense architectural responsibilities. So far it cannot be said to have risen to either.

Applied science is not enough. The engineer does not suffice. Human decencies can no longer be ignored with impunity. The architect must be called in every time—not to add sentimental trimmings as an afterthought, but to plan at the very beginning. Every building illustrated has been "signed" by an architect. Only those suffering from cataract can fail to perceive it.

[O. O. Kurz, Architect.

1. GALLERY OF OIL-SWITCH COMPARTMENTS, SEIDL-STRASSE TRANSFORMER STATION, MUNICH.

Figures 2 and 3 show master switchboards at the principal transformer station in Munich, and an important thermal power house on the Lower Elbe, respectively. The former steps down the high-tension voltage received from hydro-electric works in the Bavarian Alps to industrial and domestic frequency. Figure 1, another interior view of the same building, is a corridor in which each cubicle contains an oil-switch controlling a street sector. The succession of bridge-like concrete tie-beams in this gallery is rather reminiscent of the masonry struts which cross-buttress the narrow alleys of the harbour quarter of Genoa.

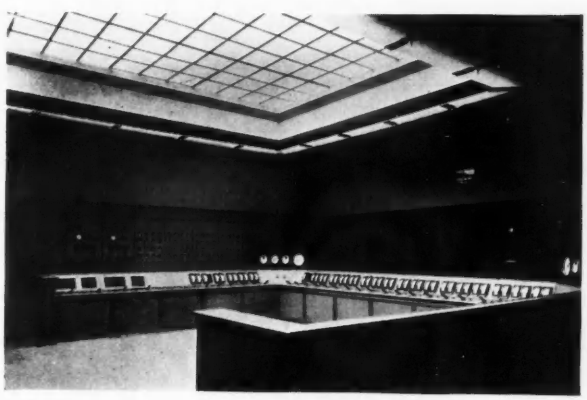
Figures 4 and 5 are good examples of the way in which modern English and Austrian forms so often unconsciously approximate to each other. Both have a certain aristocratic distinction—evinced by the former in its absence of ornament and in the latter by the nature of it—which is traditional in the best sense of the word.

BAIRD DENNISON

[The previous "Selected Precedent" on the same subject appeared in the issue for October 14 last.—ED. A.J.]

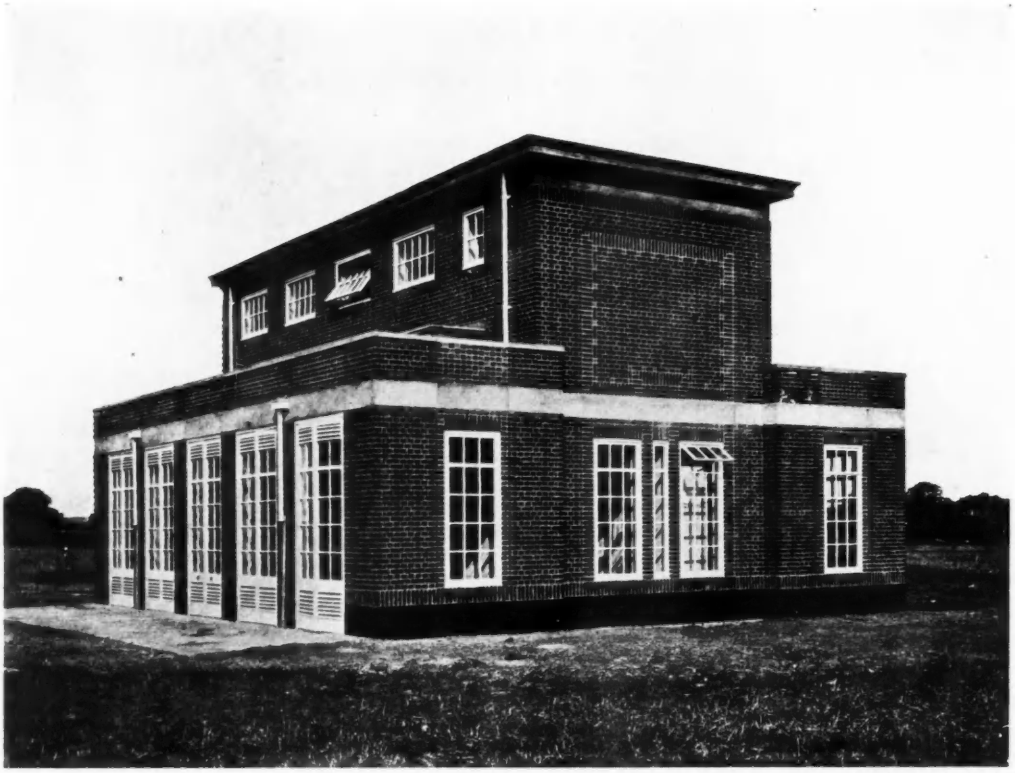
[O. O. Kurz, Architect.

2. MASTER SWITCHBOARD, SEIDL-STRASSE TRANSFORMER STATION, MUNICH.



[Hans Poelzig & Werner Issel, Architects.

3. MASTER SWITCHBOARD, SCHULAU THERMAL POWER STATION, GERMANY.

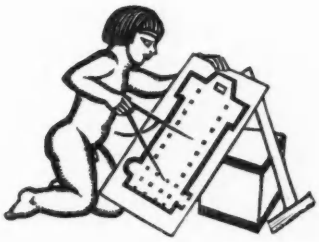


[*Louis de Soissons, Architect.*

4. *SUBSTATION AT WELWYN GARDEN CITY.*

5. *THURY SUBSTATION, VIENNA.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, NOVEMBER 11, 1931

AN ENGLISH ACHIEVEMENT

ALTHOUGH progress on the Bank of England is slow because of the exigencies of the site, a considerable amount of Sir Herbert Baker's new building is now visible behind the "Old Lady."

Whilst New York has piled up a chaos of cliffs, a confusion of crowded precipices, London has quietly realized the half formal beauty of the plan of her streets which meet at the Bank.

The date of this layout is much too old and uncertain to hazard a guess. We expect several "rolling English roads" met here in the dark ages, and that the special providence which has made the type so delightful watched over these tracks till they formed, seen from above, the figure of a starfish with radiating tentacles.

To this figure the many fine buildings owe their appearance of a rough unity. We believe that the Bank will soon be third to Westminster Abbey and St. Paul's as a place of pilgrimage, not only for the initiate, but, what is much more important, for the public. As well as Baker, Lutyens, the Burnet firm, Cooper, Newton, Mewès and Davis, Cockerell, Hawksmoor and Wren contribute to the effect.

The number of the defiles which lead from the centre gives an openness to the view which lets in slanting sun rays, and prevents the buildings from seeming to imprison the spectator. The light and shade makes, therefore, a gay effect. At the same time, relief is given to the buildings which occupy the salients. In the distance, down the defiles of the streets, can be seen windows, doorways, columns and figures in diminished size, and chiselled by a delicate perspective to the scale of silversmith's work; so appears the pylon of St. Mary-le-Bow, antiquely chased to become a tabernacle for the ancient sun, and pierced with openings whose glass is sky; and in middle distance the low rock-hewn gem of St. Mary Woolnoth matches in sooted gold the entombed regalia of some dead queen. To the east there lingers the spirit of Greek art, revived by Cockerell's keen pencil and clear vision.

The temples of the Mansion House and the Royal Exchange keep in their pillared porticoes the memory of old Rome, her laws and her magnificence. Of the walls which, fronting, frown over the streets, none inspires greater awe than the jagged cliffs of the Midland, by the proportions of its caverned openings, by their depth and the huge arches which in imitation of imperial aqueducts crown its supreme story, and by the domes which through their modest size exaggerate the scale of the stones beneath them; by all these the mind is convinced of power. With equal force the eye takes the impression of security and strength from Lloyd's, though here a smoother dignity is shown, as it were a rock-face polished by the tide and too hard to be moulded on its lower stories by the massage of the waters, but, above, cramped and beaten into vast columns, and fretted into the imagery of flowers and boskage and half-human heads, as high as where the topmost beams bear along the wall and leaning fearfully out uphold the sky.

The new part of the Bank of England rises also and answers to these others on the same plane of the upper air. The Old Lady of Threadneedle Street herself is the greatest personality of this drama of building. She has a dark beauty which has grown like a spell, more powerful with time. Though she has snatched, as she passed by, the Temple of Vesta at Tivoli to be her wreath, none can find the birthplace of her inspiration or what seer foretold the horoscope of her nativity. None has dared to become her flatterer and copyist. We only know her to have a many-sided variety in her single existence, and the freshness of something most old, coming from Soane's mind and charged with beauty and pride.

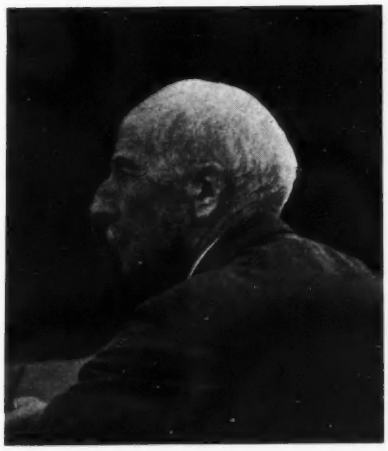
She is the life-cell in the midst of the starfish, and from her run all those tentacles, straight and curled, which are the matrix of so great an aggregate of grandeur surrounding her.

THE NEW BANK OF ENGLAND

The new Bank of England, designed by Sir Herbert Baker, A.R.A., is now becoming visible behind Soane's screen wall. The view shows the central feature of the Threadneedle Street façade.

As our leader writer remarks on the previous page, whilst New York has piled up a chaos of cliffs, a confusion of crowded precipices, London has quietly realized the half-formal beauty of the plan of her streets which meet at the Bank. "We believe that the Bank will soon be third to Westminster Abbey and St. Paul's as a place of pilgrimage, not only for the initiate, but for the public. As well as Baker, Lutyens, the Burnet firm, Cooper, Newton, Mewès and Davis, Cockerell, Hawksmoor and Wren contribute to the effect."

NEWS & TOPICS



Nathaniel Lloyd, O.B.E., F.S.A., F.R.I.B.A., whose book, *A History of the English House*, is about to be published by The Architectural Press.

THE IMPORTANCE OF BEING MR. ERVINE

EACH Sunday I expend the sum of twopence on a copy of *The Observer*, wherein (as everybody must surely be aware) Mr. St. John Ervine dispenses wisdom weekly in a highly dramatic and invigorating manner. On actual acquaintance, it is said that famous men commonly prove disappointing, even to their most ardent admirers. I have never seen Mr. Ervine in my life, and would prefer, therefore, to retain my own visualization of him as a steely-eyed Hercules, of immaculate speech and defiant mien, with fists permanently clenched and encased in boxing gloves. Beneath the shelter of a column (headed, most appropriately, "AT THE PLAY"), Mr. Ervine gives each Sunday his redoubtable display of journalistic shadow-boxing, challenging all comers, dealing terrific blows at imaginary opponents, acting as referee and counting them out, throwing bouquets and catching them himself, and, week by week, posing magnificently as undefeated champion in the art of robust controversy.

*

Although the supply of antagonists for use in exhibitions of this particular branch of pugilism is practically unlimited, the best results are recorded when their selection is restricted to a type that is unlikely to hit back. Architects, as a class, are among the mildest of men, and when they are chosen by Mr. Ervine as his sparring partners he is always in fine fettle.

*

In case anybody conversant with the writings of Mr. Ervine has not yet heard of the Larder Window Incident, I will recount it in his own words. ". . . Two decades ago," announces Mr. Ervine briskly, from his private corner in *The Observer* of November 1, after clearing everybody out of the ring, "when I remonstrated with an architect who had provided my flat with a larder which had a large window with a south aspect and was, therefore, unfit for the storage of food, he blandly remarked that to have done otherwise would have spoiled his outside elevation! I then violently informed him that I could not live on his outside elevation, that I objected to having my food tainted through his incompetence and that, as far as I could see, the block of flats had been designed by him, not for the convenience of the inhabitants, but for the pleasure of the passers-by. I would have said more than that to him, but, unfortunately, he had fled . . ." For twenty years Mr. St. John Ervine has been looking out upon the world of architecture through this larder window, and although the window was large his view has been permanently obscured. I have never seen any of Mr. Ervine's plays, but I should not be at all surprised to learn that in every one the central feature in the most important act is a larder window. In any love scene dramatized by Mr. Ervine, I feel sure that the hero only wins the heart of the heroine after an impassioned outburst on the inefficiency of architects in the matter of larder windows. I do not know whether Mr. Ervine specializes in tragedy, but it is clear that in future productions of his plays provision should be made for the introduction of lots of disillusioned, miserable-looking supers who could wander about the stage, wearing false noses and red beards, and keep on asking the audience what architects are doing about acoustics and electric light and smoky chimneys and smelly drains and damp walls and the echo in the Albert Hall.

*

Mr. Ervine is so concerned with such matters that, on occasion, even his dramatic criticisms are enriched with the technicalities of building construction. Thus: ". . . There was a scene, performed in electric-blue moonlight, in which Sir Charles leant against a lintel while 'John Peel' was sung off. . . ." I have no idea how Sir Charles managed to perform this remarkable feat, but if Mr. Ervine can himself, in his own home, lean comfortably against lintels without the aid of a step-ladder, he must be a very much taller Hercules than even I, his admirer, had visualized. On the other hand, it is of course possible that Mr. St. John Ervine's unsuccessful attempts to lean against the lintel of that large larder window are really responsible for his distorted outlook upon architects and their place in life.

ARE BUILDING REGULATIONS FETTERED BY RESTRICTIONS?

What is the real truth about building regulations? The Ministry of Health, through Mr. Shelley, has told us how mistaken we are to suppose ourselves fettered by restrictions which exist only in our imagination; but imaginary or real, our grievances continue to be aired, now by one body, now by another. Finally, Sir Owen Williams trumpets his complaint through the columns of *The Times*, maintaining, and maintaining again even under official reproof, that the restrictions upon the methods of using concrete are indeed obsolete and wasteful. Now, who out of these contesting and protesting parties is right? The Ministry should know their own rules and regulations, and one would be bold to challenge statements issuing from that quarter. But do they know as much of concrete as Sir Owen Williams? And what sort of slaves are we that do not know when the shackles have been struck? Or what sort of shackles are they?

THE HOME OF LONDON'S CHIEF CITIZEN

The Mansion House was designed in 1739 by George Dance. Since then it has suffered by time and use. Familiarity has bred contempt, and the original proportions of many of the best apartments have been worsened by handy little alterations making for convenience, and little else beside. Those that Mr. Perks, and later Mr. Tatchell, have been effecting are in part a restitution of these damaged proportions, and in part a definite modernization of antiquated planning and equipment. The restoration of the original gallery in the Egyptian Room is of the first order, and is perhaps the most important piece of work undertaken; but of the second order there is no lack. The kitchens, entrances, lifts and other services have been remodelled to a considerable extent, and new accommodation has been added in an upper story hidden away behind existing roofs. Most interesting is the creation of roof gardens for the mayoral staff.

ASTRAGAL

NOS. 120—121 PALL MALL, S.W.

DESIGNED BY SIR EDWIN LUTYENS, R.A.

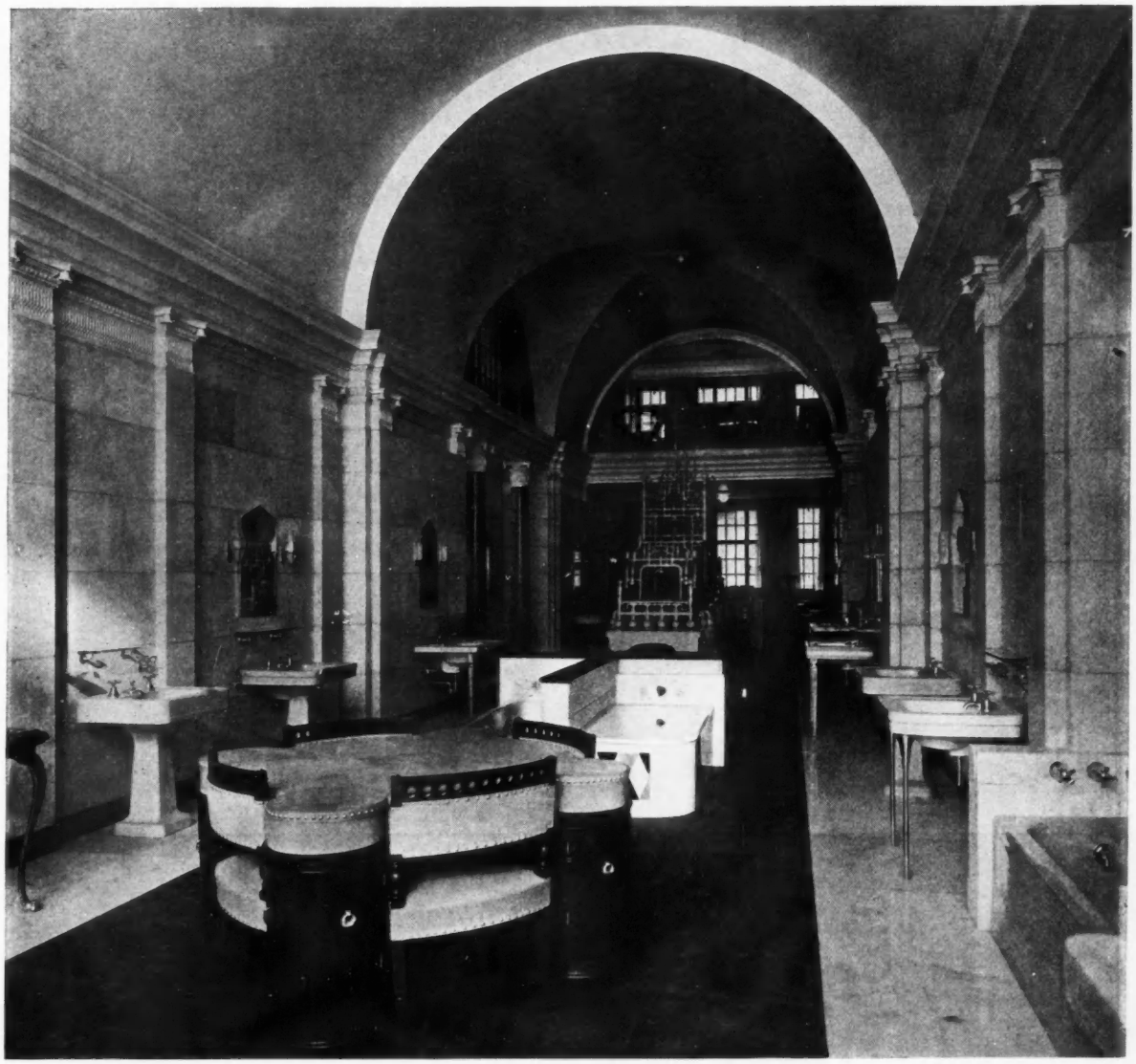
IT is to be hoped that the whole commercial world will entertain the same notion of architecture that Messrs. Crane-Bennett have displayed in their new showrooms and offices, opened on Wednesday last, in Pall Mall. Then we shall achieve something of a spirit of consistent gallantry; and no longer witness the anomaly of a useful building accessory, a pattern of gracefulness in itself, treating with cold contempt or rudeness the architectural surroundings in which it is exhibited. Crane-Bennett stand upon architecture as upon a foundation; and whether one is a traditionalist or a modernist—even whether one likes the building or not—one cannot but admire the uncommon strain of courtesy existing between the settings for the exhibits, the decoration, the furniture, and the main structure.

The building comprises a ground floor and basement for the display of sanitary fittings, and a sub-basement devoted to the exhibition of heating equipment, including radiators. In the sub-basement also is the boiler-house, which forms a model showroom for the firm's automatic oil-fired and gas-fired boilers: these are shown in actual operation. Above the ground floor are a mezzanine containing a lounge, bureau, refreshment annexe, dressing-rooms and lavatories for the use of visitors, and five stories devoted to offices.

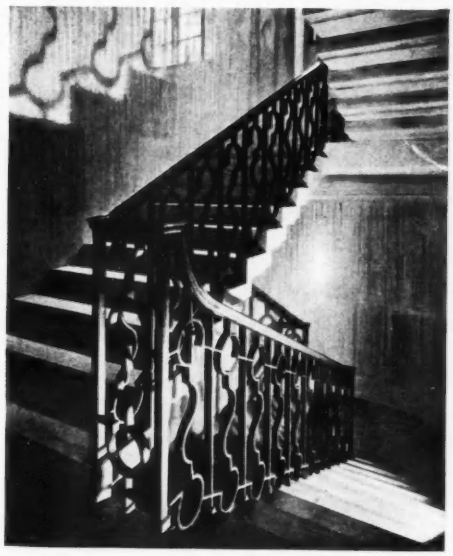
Internally, there is much to interest the visitor. There are the main showroom, with two magnificent bathrooms adjoining, and with all the walls, floors and settings for the sanitary exhibits—many with gold-plated fittings—in marbles of different hues. There are the visitors' lounge, with its walls of limed pine, the marble lined and floored lavatories with their ivory-tinted fixtures and chromium-plated fittings and radiators. Then there is the furniture, hand-made and carved to the design of Sir Edwin: tables and chairs that join together to form one piece, tables and chairs in limed pine and in walnut. And then there are the cosy easy chairs, of most unusual shape, where one could sit dreaming for hours.

E. R.

The main front is faced with Portland stone, and the roof is of solid concrete, covered with cast lead. The semicircular window to the showroom is of bronze, and those above are of wrought-iron.



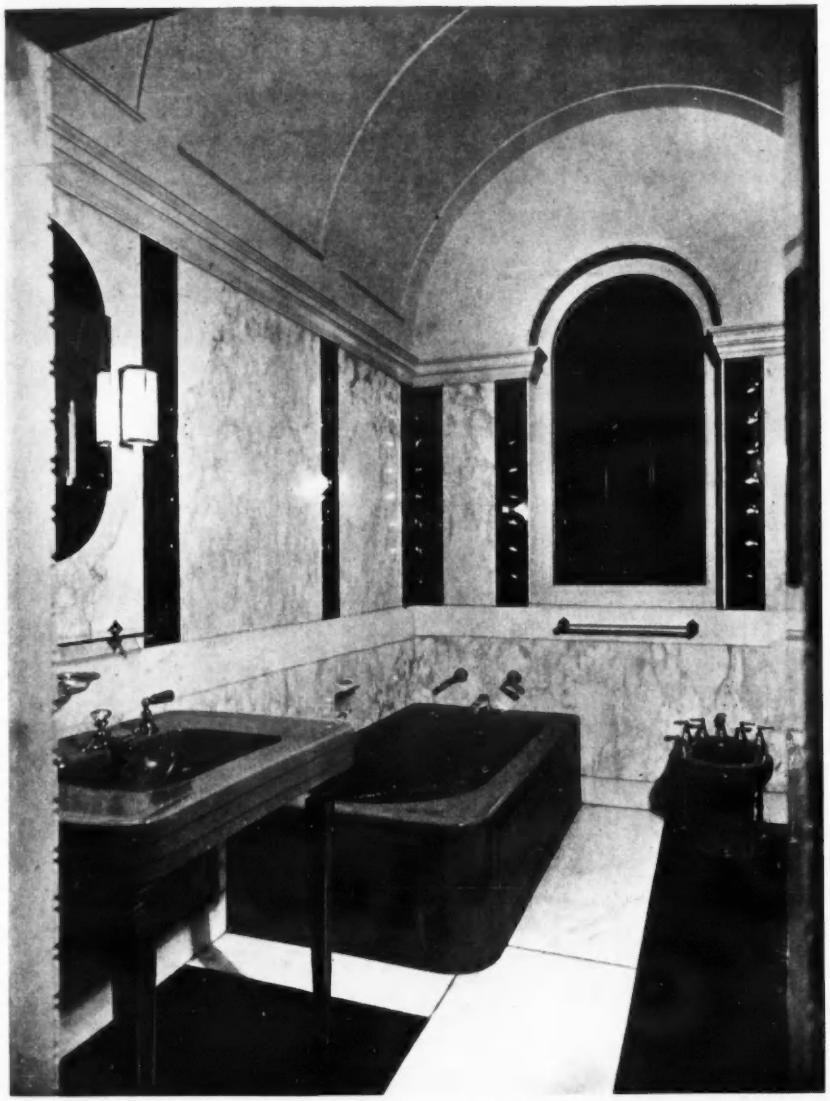
Nos. 120–121 Pall Mall, S.W.] [*By Sir Edwin Lutyens, R.A.*



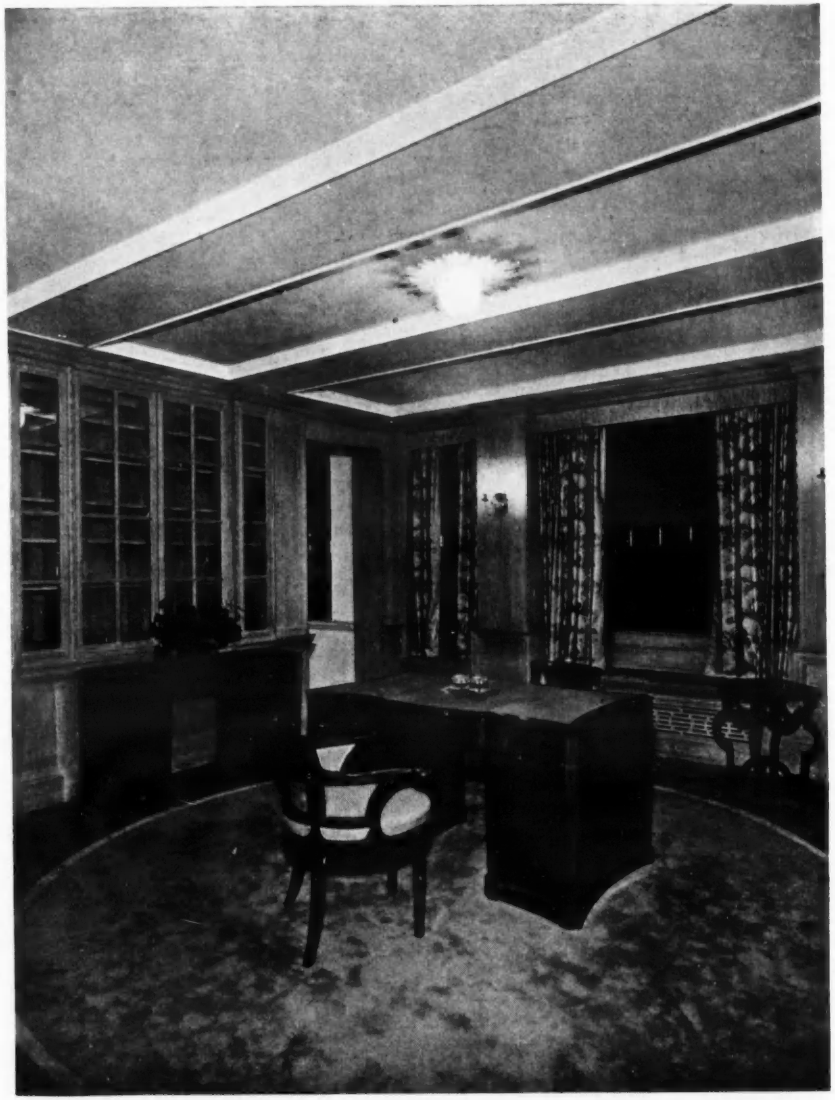
In the principal showroom, on the ground floor, looking towards the balcony to the visitors' lounge.

The principal staircase is lined and floored with travertine marble. It has a wrought-iron balustrade and a mahogany handrail.

The secondary staircase leading from the main showroom up to visitors' lounge and down to exhibition rooms in basements.



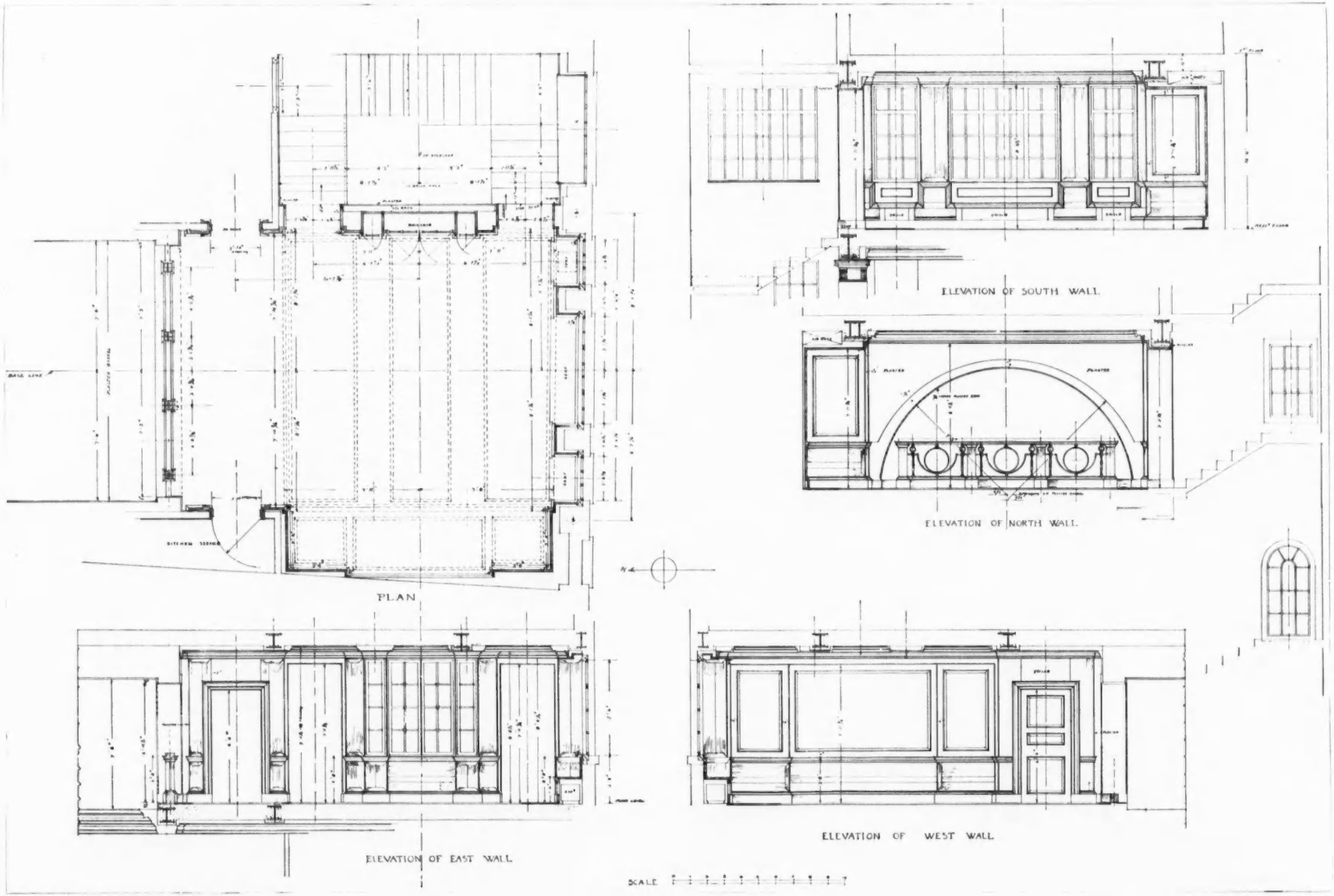
One of the two bathrooms adjoining the principal showroom. The walls and floor are of marble; the bath is in pale green porcelain with chromium-plated fittings.



The visitors' lounge, a drawing of which appears on the facing page. The furniture, designed by Sir Edwin Lutyens, is of walnut, red Niger leather, and hand-split cane.

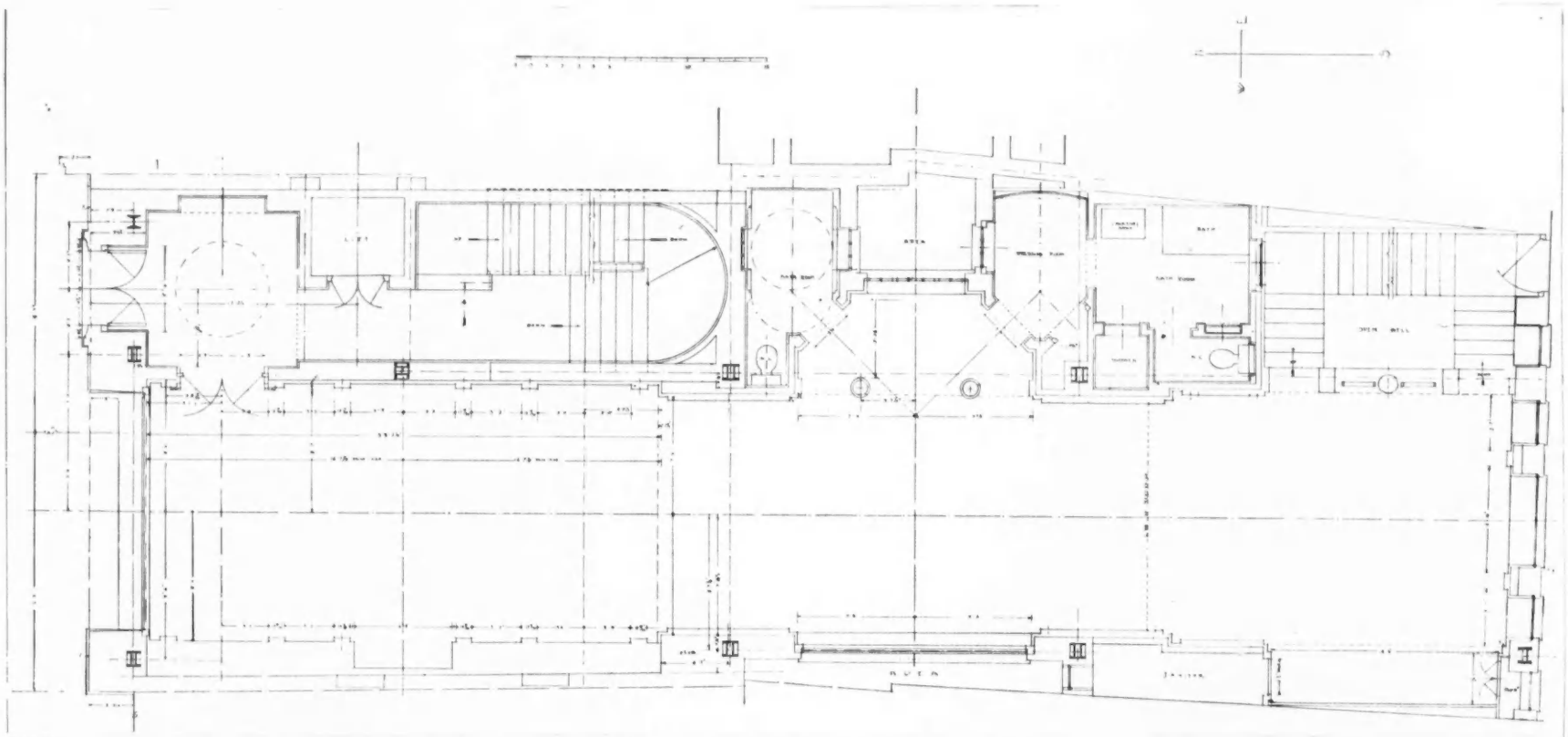
are of marble; the bath is in pale green porcelain with chromium-plated fittings.

designed by Sir Edwin Lutyens, is of walnut, red Niger leather, and hand-split cane.

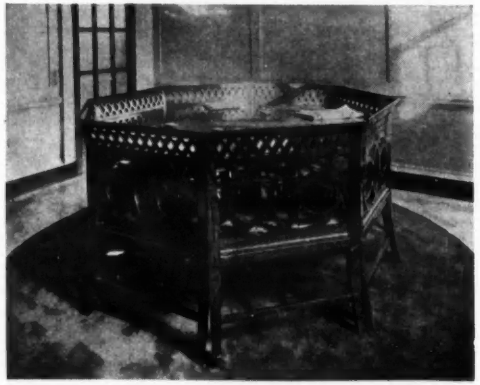


Nos. 120–121 Pall Mall, S.W.] [*By Sir Edwin Lutyens, R.A.*

The architect's working drawing of the visitors' lounge. The walls are panelled in limed pine, and the floor is of oak boarding. The wrought-iron railing to the balcony is painted red. A cupboard, also in limed pine, for the accommodation of books, is built into the east wall. Adjoining the lounge are an information bureau and dressing-rooms.

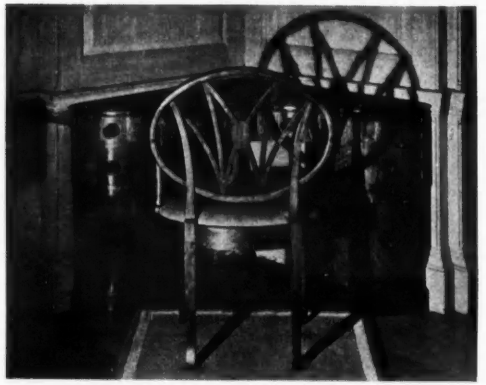


On the ground floor are the principal showroom, and two bathrooms, with all the walls, floors and settings for the exhibits in marble of various tints. There are also showrooms in the basement and sub-basement.



In the boardroom the octagonal table and the chairs can be put together to form one piece of furniture.

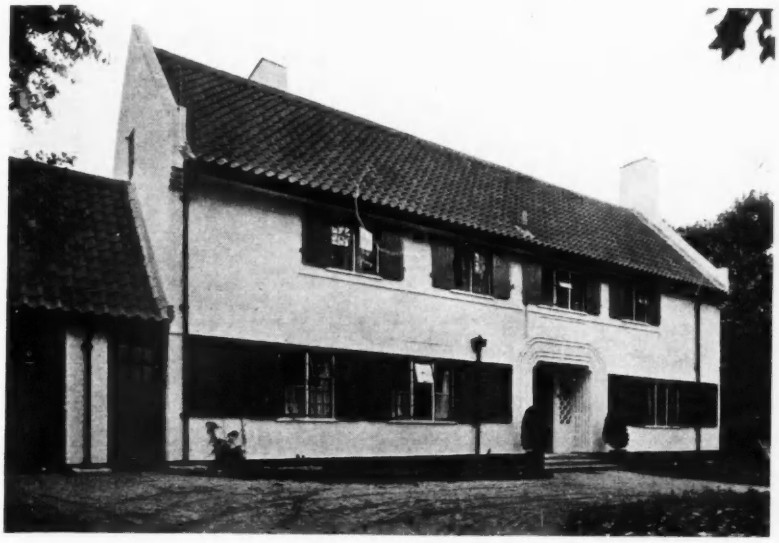
NOS. 120—121
PALL MALL, S.W.
DESIGNED BY SIR EDWIN LUTYENS, R.A.



A corner table, with cupboards instead of drawers, and a chair, in the visitors' lounge. Both are of walnut.

HOUSE IN WOODSIDE AVENUE, NORTH FINCHLEY

DESIGNED BY WELCH, CACHEMAILLE-DAY AND LANDER



The main front. The walls are faced externally with rustic Fletton bricks, lime-whitened.

Looking along the garden front. The washing space for cars is seen on the extreme right.

THE site of this house was originally part of the garden of the adjoining one. It is very well wooded, and one of the problems that faced the architects was to place the house in a satisfactory manner upon the site, in order that a minimum number of trees would have to be felled.

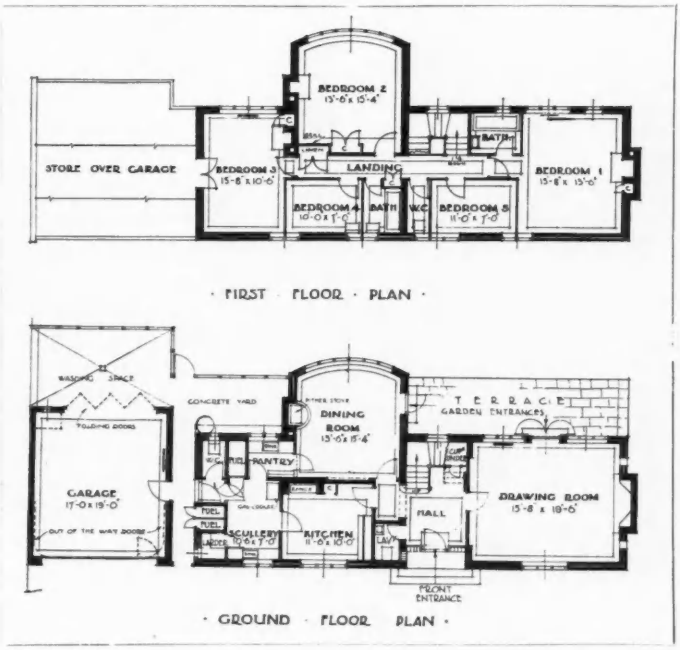
It was essential to run the house with as few servants as possible and it was therefore planned with this end in view. The dining-room is fitted with a stove, which heats the radiators in the drawing-room, hall, garage, and bedrooms Nos. 1 and 3 shown on the plan. There is a particularly large cylinder in the linen cupboard, with a radiator grille and sliding doors at the back of it, opening into bedroom 2, which accordingly receives a certain amount of warmth. The domestic hot water is supplied from a heating range in the kitchen. By this means the house is adequately warmed in normal weather.

The garage is planned for two cars and has folding doors at the back and "out-of-the-way" doors in the front. By this means it is possible for cars to go right through the garage to the washing space at the back; thus the front of the house is not spoilt by a paved yard.

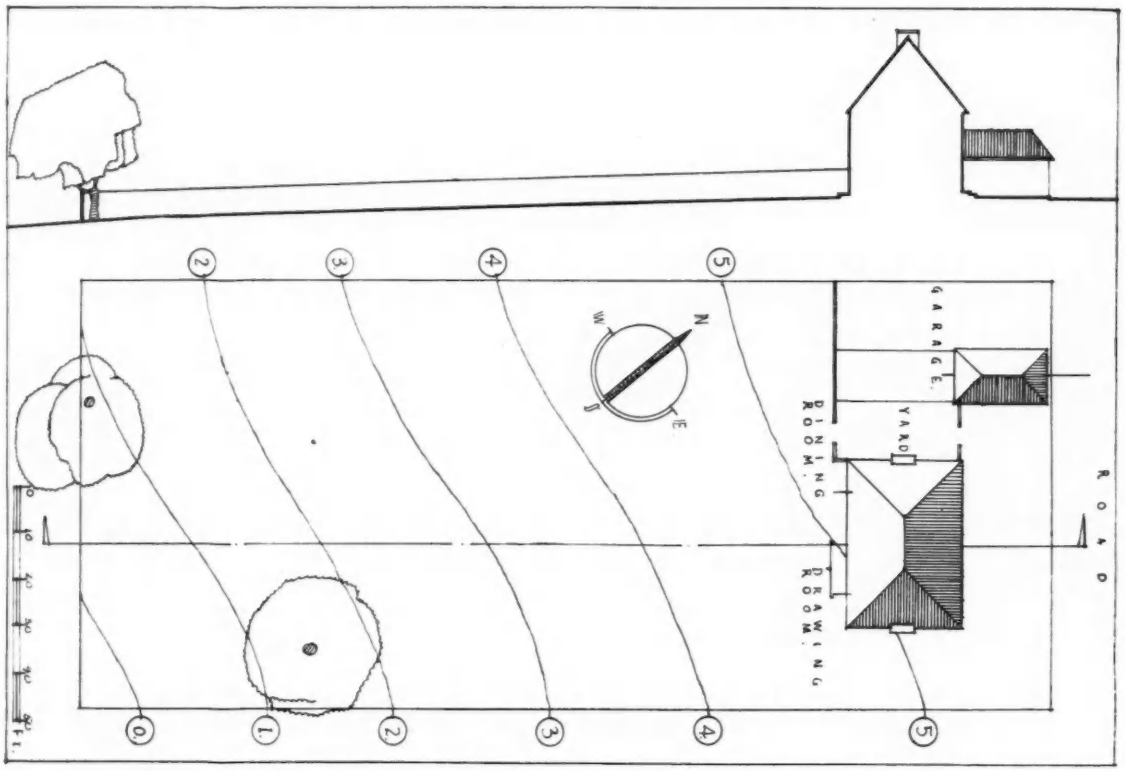
The house is faced externally with rustic Fletton bricks which have been lime-whitened; and the plinth is tarred. The roof is covered with sand-faced red pantiles.

A photograph, detail drawings and a description of the main entrance door and surround will be found in one of the supplements accompanying this issue of the JOURNAL.

The drawing-room, showing the large open fireplace, which can be used for supplementary heating during particularly cold weather, in addition to the radiators.



Ground- and first-floor plans. The garage provides accommodation for two cars, and has "out-of-the-way" and folding doors at front and back.



Site plan to illustrate the existing conditions that have to be met.

THE THEORETICAL PLANNING OF GARDENS

BY
E. A.
JELLICOE

i : The Half Acre

THE area of the ground is about half an acre, in a residential district where land is valuable. The house is small but well built, and the owner wishes to have a garden in keeping with his own formal method of living. There must be a lawn of sufficient size for a tennis court, a summer-house and, as his wife says, "lots of flowers." The ground slopes gently north to south, and there is a good outlook at the end of the site.

FIRST AND OBVIOUS SCHEMES

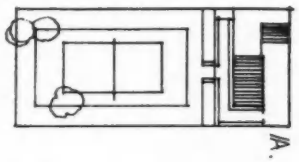
THE first sketch plans "A" and "B" place the tennis court in the centre of the site. The symmetry thus given to the garden is emphasized and enhanced by the position of the trees. The court is laid out on the centre line of the dining-room window, and either of these schemes appears so obvious that we might be tempted to accept one without exploring further.

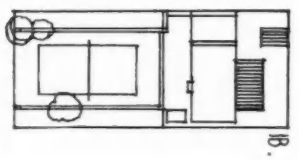
The view of the whole garden from the windows of the house, with the trees framing the outlook beyond the lawn, is especially promising.

AN ELEMENT OF DISCOMFORT

If house and garden are, however, to be considered as a unit, the discomfort of the plan is clear. House and garage are unsymmetrical on the site, and plans "A" and "B" suffer from confusion of ideas. Half the scheme is symmetrical and half asymmetrical.

To the untrained eye this would not be consciously noticeable in actual fact; the owner would only feel after a while that "something was not quite right," that the sense of repose was disturbed. While enjoying, too, the view from his windows, he would realize that all his eggs were in one basket, and that much of the charm of a garden (that it should not be seen all at once) did not exist.

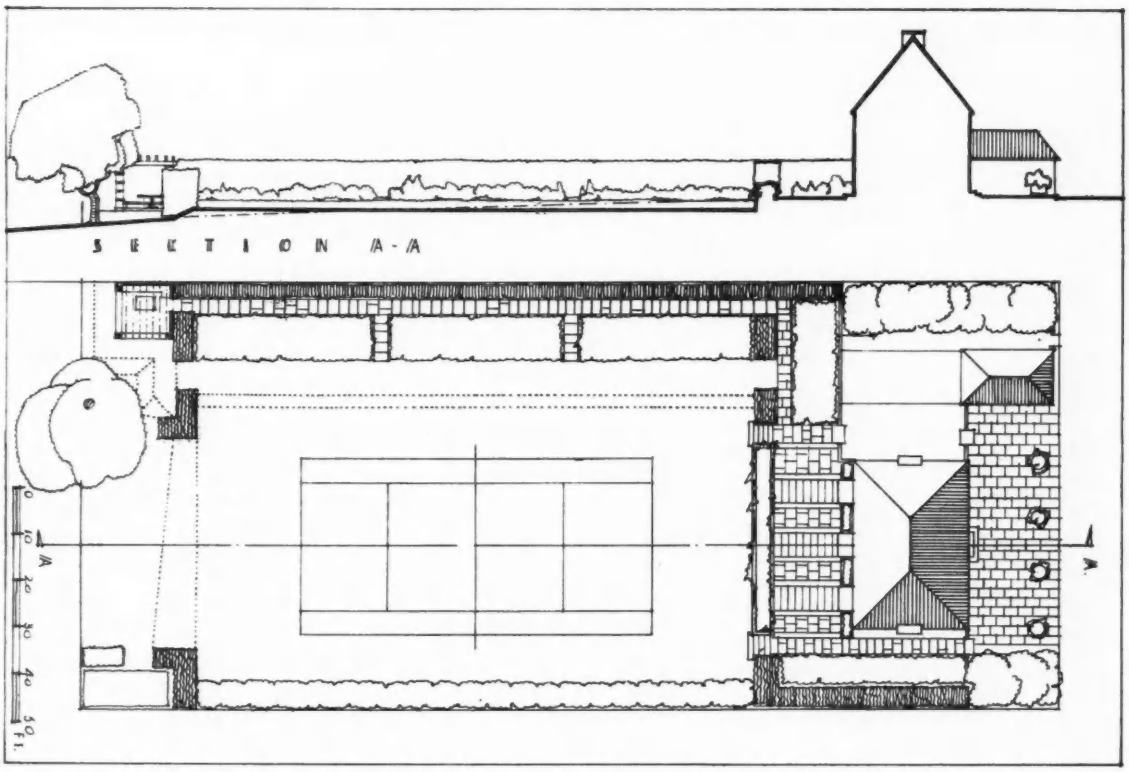

A.


B.

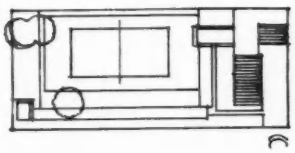
NOT ENOUGH "MYSTERY"

Dissatisfied, therefore, we pass on to schemes "C" and "D." Here is an arrangement where the layout of buildings and garden on the whole site is consistent. There is a direction or "flow" given to the garden; there is a feeling both towards the cross fall of the site and to the rectangular shape itself.

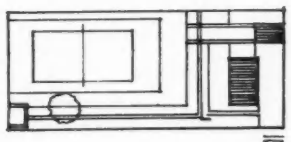
Though not well placed as regards aspect, the flowers are concentrated instead of being spread on each side of the court. Since in "D" one of the



The final plan adopted in the light of the considerations described.



C.



D.

trees has to go, "C" is clearly the better of the two schemes.

Once more, therefore, we might choose this design (and not do so badly) were there not still somewhere a sense of discomfort.

CLOSER RELATIONS OF HOUSE AND GARDEN

In reviewing broadly the elements of the composition, two appear more important than the others. These are the house and tennis court, and on so small a site they must undoubtedly be more closely related than has so far been considered.

SACRIFICING A TREE

This suggests schemes "E" and "F," both of which eliminate one of the trees. Probably it would be difficult to convince the client that these schemes are better than "C," because he will protest that a tree once cut down cannot be put up again.

This dilemma of the preservation of natural features as opposed to the claims of design frequently occurs. We should, however, be wise to sacrifice the tree, for the first need of a garden is harmony of thought.

The layout has become a faint echo of the original group of buildings, and since "E" is less pretentious than "F," this is the scheme upon which to decide.

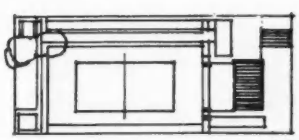
UTILIZING THE CONTOURS

In developing the block plan, the levels are arranged to make use of the contours, both to add interest and economize the shifting of material. The herbaceous border and grass walk are slightly raised above the lawn, and, in connecting the terrace upon which the house stands to the only other high elements of the site (the tree and the summer-house), suggest that the scheme has form as well as pattern on plan.

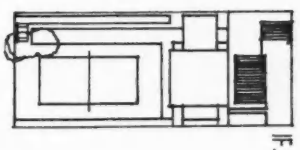
The evergreen clipped hedges help to spread what would otherwise be an isolated block of house. They also provide a foil to the flowers, a frame to the view, and break up the garden so that all cannot be seen at once. The paths are confined to one line of circulation, and the effect from the terrace where none could be seen would probably be one of spaciousness.

The disappearance of the farthest boundary, owing to the level of the tennis court, would also add to the sense of size, and, after the manner of the historical ha-ha, extend the garden beyond the confines of the rectangle. The summer-house is purposely secluded at the extremity of the site, while at the more public end the entrance forecourt, as if in contrast of idea, is open to the road.

Despite these plausible arguments, and the apparently limited scope offered, there might be at least half a dozen rearrangements as good as, if not better than, the one suggested.



E.



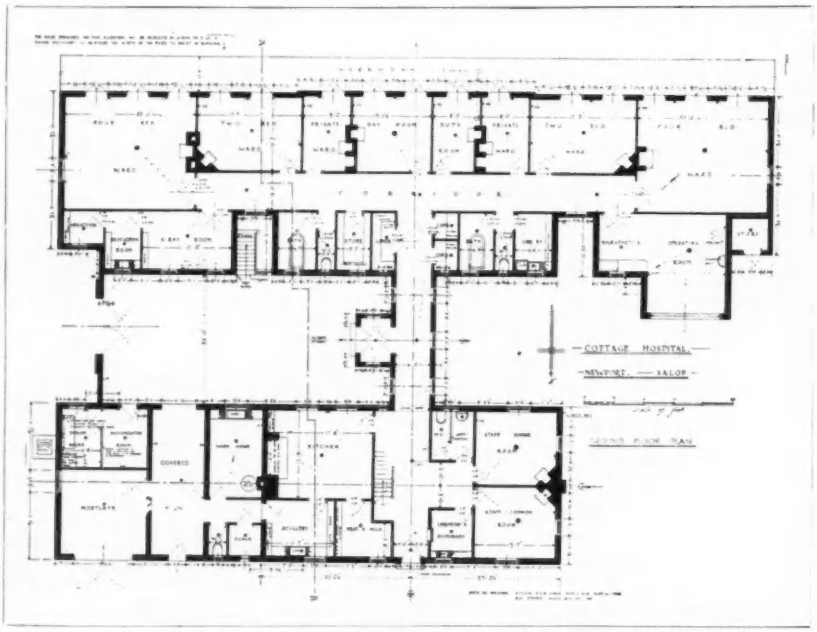
F.

The ward block. The materials are multicoloured bricks and grey roofing slates.

COTTAGE HOSPITAL AT NEWPORT, SALOP

DESIGNED BY EDMUND KIRBY AND SONS

THIS hospital was built about two years ago from money left in trust for the purpose by the late Annabelle Lady Boughey, Aqualate, Newport. The site is on the west side of the main London road and about a quarter of a mile north of Newport station. The blocks are set back about a hundred yards from the frontage. They are constructed mainly of local multi-coloured bricks from Lilleshall and are roofed with grey French slates.



The ground plan is roughly of H-shape. The south side has a veranda.

The buildings are arranged roughly in the form of an H with a short and long side. The long side, which faces south, includes the ward block, a room for minor operations, and the X-ray department, and has an external veranda, with sun blinds, to which there is direct access from each ward. The north or short arm of the H consists of the administration block, and accommodation for staff, kitchen, mortuary, etc.

The main entrance is through an archway surmounted by a stone tablet on which are inscribed the name of the hospital and donor. This gives access to a small courtyard, at the other end of which is the entrance to the corridor connecting the ward block and administration block.

As the ward and administration blocks are necessarily of one and two stories, respectively, some difficulty was experienced, the architects state, in obtaining symmetrical balance from the point of view from which the hospital is mainly seen, viz. the road. With a view to this, the brick walls are kept on the same level throughout and the extra story of the administration block is formed in a steep mansard roof.

The entrance archway from London Road.

The administration wing, operating room, etc.

LETTERS FROM READERS

"The Architecture of Rugby"

SIR,—With regard to Astragal's note on "The Architecture of Rugby," which appeared in the JOURNAL for October 28, it might interest you to know that my partner, Geoffrey C. Wilson, distinguished himself as a Rugby footballer. He was captain of the famous Richmond Rugby Football Club in 1909–10–11, and also played for, and was captain, on many occasions, of the Surrey County XV. In 1908–9 he was a member of the London XV which met the Australians, and was perhaps unlucky not to get an international cap, as he was chosen to play for England in all three trial games, 1909–10. Unfortunately, in the final trial, England were beaten by the Rest, and it was his fate to be numbered amongst the scapegoats which such a fiasco was sure to demand.

Astragal's reference to the A.A. as an excellent nursery of the game reminds me that when "G. C." first started the A.A. Rugby team, H. P. G. Maule, himself an old Rugby footballer, being then in charge of the A.A. day school, I became the first hon. treasurer, with Wilson as hon. secretary of the new athletic club.

SYDNEY TATCHELL

"Bernard Whistlow, F.R.I.B.A."

SIR,—Now that "Bernard Whistlow, F.R.I.B.A.," has reached a sad but inevitable end, I would like to offer Mr. Creswell my doubtful appreciations. His artfulness in telling a story delights me, his literary skill is beyond all reproach, but his realism has had the unwanted effect of convincing me beyond every hope that Bernard was a poor sad lot.

The illusions I had as to architects and the architectural profession are now completely deadened. Bernard may not be typical, but such is Mr. Creswell's skill that he stands for me as the F.R.I.B.A. of all time, a poor, palpitating, curmudgeonly, tuft-hunting worm.

Perhaps he is a satire, perhaps a severe lesson, but there he is, and I feel that I am getting more like him every day. But Lord save me from the hunting-field, and the tennis parties at Nollingborough, where the mistress art is bred.

Is the profession of architecture in England really as bad as that? I can't believe it. Surely there are some purposeful, cut-throat, take-it-or-leave-it fellows who do not have to spend half their lives "poodlefaking" round the ladies' choir or toadying to the "county"?

Surely there are in existence bold, bad bounders who can draw up plans and supervise works without knowing the meaning of "love-forty" or "honours easy"? If not, then thank goodness we have the speculative builder who takes his afternoon tea out of a can in the company of sweating workmen.

Mr. Creswell is too hard on us. He leaves us in such doubt as to whether Mr. Whistlow is a satire, a trick of fate, or a living picture of you or me. Bernard seems too pathetic and too affectionate to be a satire, too real and commonplace to be a trick of fate, and too socially sodden to be you or me.

I give him up.

FREDERIC E. TOWNDROW

"Wafer-Oven" in a Small Church

SIR,—I live about one mile away from an extremely interesting Parish Church, dedicated to St. Maurice (the Patron Saint of Generals, from the Romish calendar).

I have spent some interesting half-hours in this church looking around, and have discovered what I believe to be a "wafer-oven," in the small side chapel.

No flue is visible externally, except a narrow slit in a stone, with two iron bars across, high up on the wall on which the "oven" occurs.

I am wondering whether this is a common occurrence in mediæval churches—it is certainly the first I have seen.

I totally forget the name of the book in which I have seen a description of these "wafer-ovens"—but have read somewhere that "only one of these ovens is now in existence, and that at the Abbey Church of Malmesbury."

Before the Reformation, the officiating priest himself baked the wafer used at the Mass.

I have looked through Cox's *Norfolk Churches*, but in his description of Briningham Church (the one to which I am referring), no mention is made of this oven.

J. L. WILLIAMSON

GARDEN DESIGN

MR. G. A. JELLICOE, A.R.I.B.A., began his lecture on "Designing the Garden" at the Architectural Association on Saturday last by saying he proposed to emulate the *Time Machine* of H. G. Wells, and to transport his audience first into the past and then into the future. In between he would survey present-day gardens.

The English school of landscape gardening, which developed at the end of the eighteenth century, was an English phase related to the English landscape. It was the age of the painter; views from the house were as pictures on the walls of a room; and for a human being to enter was to shatter an illusion. The period from which this one had reacted was altogether different. The seventeenth and eighteenth centuries abroad were the age of the actor, and in showing views of Chantilly, Versailles and some Austrian and German gardens, the lecturer drew attention to the number of richly dressed people, as well as the pageants and festivals, which the gardens were designed to hold and be an effective foil for. He then passed into Italy, and said that a great value of the Italian garden lay in its sympathy for the individual. He explained that although to English eyes the gardens might appear austere, his audience must remember the climatic conditions. These precluded flowers, and the light called for the cool tones of green hedges and grey stone, and the sound of water.

Passing over gardens showing the essential relation of the Italian garden to landscape, the lecturer returned to the traditional garden of England. Step by step he showed how the beautiful materials, trees, grass, and flowers, had combined with the naturally blunt character of the Englishman to resist the rich garden shapes of the Continent, when these shapes were influencing the architecture under the Renaissance. He touched on the Victorian era, and showing gardens of the revival, he suggested that Sir Edwin Lutyens was the most versatile garden designer England had known.

The lecturer then returned to the present time, and remarked that the place of the grand gardens of the past was taken today both by an innumerable number of small gardens and by the municipal or communal garden. In the former, in which his audience would be most interested, he deplored the small sense of scale.

The planning of the garden was as much a matter of science and logic as that of the house. The garden, in effect, was an extension of the house; it was a blending of man and Nature. He expected to see the parts of the garden related to parts of the house. He stressed the element of surprise, that of not seeing the whole garden at once; but this could only apply to a garden of reasonable size.

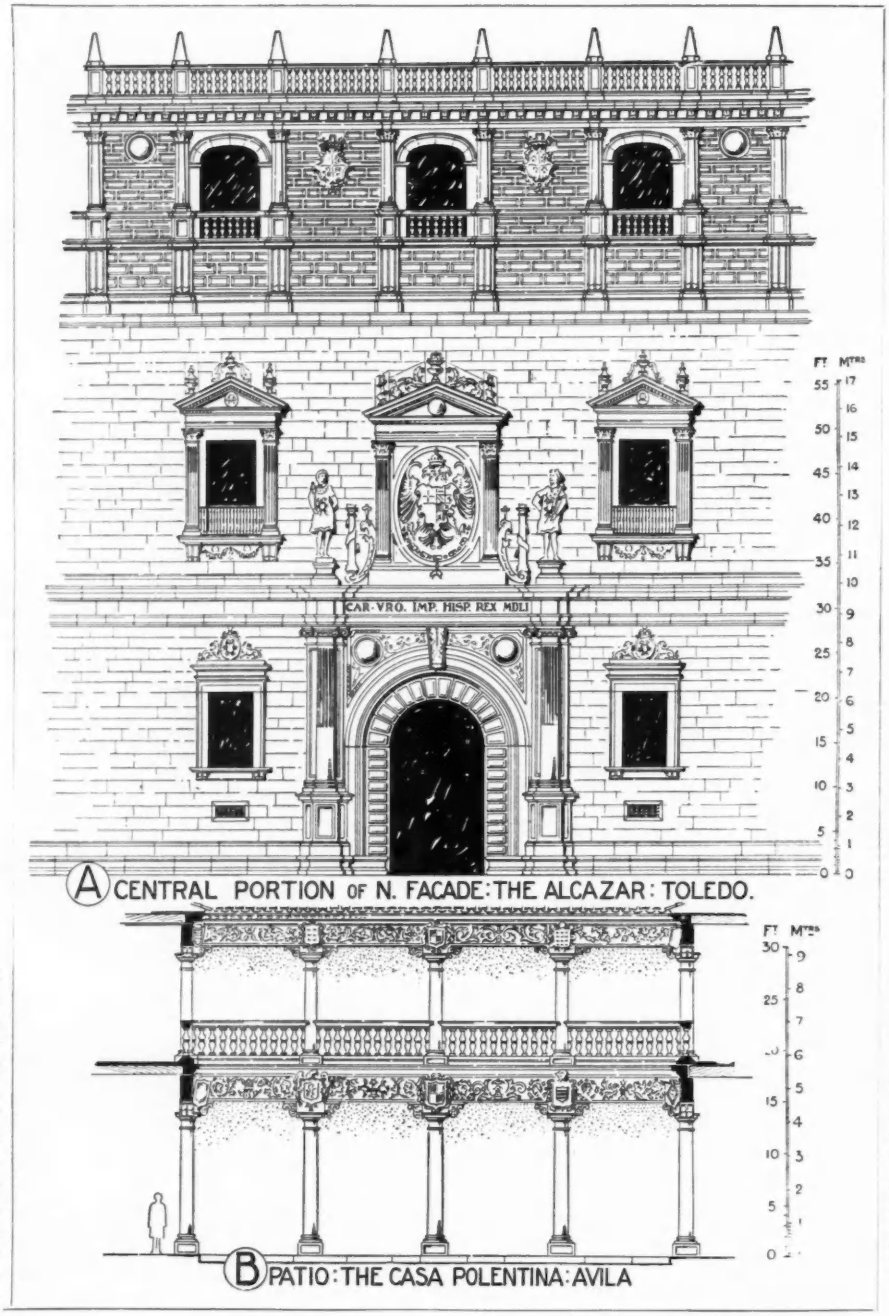
[On pages 640–1 is published the first of several articles on "The Theoretical Planning of Gardens," by Mr. Jellicoe.—ED. A.J.]

LITERATURE

THE "BIBLE" OF ARCHITECTURE

IT is interesting to note that an increasing interest is now being taken throughout the civilized world in all things appertaining to architecture, and more especially that with the advance of democracy the people as a whole are beginning to recognize the value of the art in national and civic life. The reason why architecture has not hitherto been assigned its proper place in education is, no doubt, the erroneous idea that the principles governing architectural form are in the nature of a highbrow subject divorced entirely from ordinary everyday life. It is, therefore, pleasing to note that professional societies and other bodies, both in this country and abroad, are affording the younger generation an opportunity, such as they have never had before, of obtaining at least a working knowledge of the mistress art by lectures delivered by well-known practitioners. There is, however, still much to be done in this respect.

Sir Banister Fletcher is, as readers of this JOURNAL are well aware, from the reports which appear weekly in its pages, a special lecturer at the L.C.C. Central School of Arts and Crafts. The fruits of Sir Banister's brain, however, have not only whetted the appetites of students of architecture these many years, but his *History of Architecture on the Comparative Method* is, without doubt,



From A History

The central portion of the north façade, The Alcazar, Toledo; and the "patio" of the Casa Polentina, Avila, Spain. The former is a castle of mixed Moorish and Gothic character, and is built entirely of granite. The north façade was added in the Plateresque style (in 1548) by Charles V, when he converted the Alcazar into a Royal Palace. The panel above the door is carved with his arms. The "patio," below, is reminiscent of a Roman atrium, in which the columns have bracket capitals to support the architrave.

known throughout the world. If he had done nothing greater in his life, this book alone would serve to carry his name down to posterity as one of the most outstanding personalities of our age.

It was, I think, at the close of the nineteenth century that the first edition of Architecture.

Some typical examples of the inns of the Middle Ages which are still in existence. Sir Banister Fletcher states that "these inns, as well as monasteries, provided accommodation for travellers, while many inns were used as posting houses. The George Inn, Glastonbury" (letter J), he continues, "is a substantially built structure, with mullioned and traceried windows. The Feathers Inn, Ludlow (letter N) is a delightful bit of half-timber construction and a pleasant reminder of the local style of building."

was published. Since then, no fewer than eight editions have seen the light of day, each becoming more corpulent than its predecessor, with the result that the ninth volume contains over 1,000 pages, and is copiously illustrated by over 4,000 photographs and drawings, forming an unrivalled panorama of the world's finest buildings, as produced by man in every age. The subjects of these have been classified and arranged with such obvious consistency and uniformity, that the appreciation of the differences between the various periods in the evolution of architecture is reduced to a matter of perfect simplicity.

In the new edition, published a few weeks ago, the main features of the earlier issues have been preserved, Sir Banister's aim being not only to describe the characteristic features of the architecture of each people and country, but also to consider those influences which have contributed to the formation of each particular style.

In order to bring out the effects of these influences, and also the qualities of the styles themselves, the author has retained his comparative and analytical method, so that by the contrast of qualities the differences may be more easily grasped by the reader.

The book has been divided into five sections. The first is divided into six

The Palazzo Giraud, Rome (1503), one of Bramante's later works.

The Palazzo Pandolfini, Florence (1530); one of Raphael's most famous designs.

From A History of Architecture.]

The Municipal Building, New York, designed by McKim, Mead and White.

The Merchandise Mart Building, Chicago, designed by Graham, Anderson, Probst and White. It is twenty stories high, and houses more than twenty thousand people.

[*By Sir Banister Fletcher, PP.R.I.B.A.*

Waiting hall of the Pennsylvania Station, New York, designed by McKim, Mead and White.

leading influences that help to shape architecture. The first three are physical conditions : geographical, geological and climatic ; the civilizing forces—religious and social conditions; and the last the historical background.

The second section explains the character of architecture, with various theories of origin and evolution.

The third, probably the most interesting of all, is devoted to examples of the chief buildings which are the result of the various influences, supplemented by brief but admirable descriptive notes.

The fourth comprises the comparative analysis of the essential features of each style; and the final section is a comprehensive survey of the principal works for readers who may wish to pursue the study of any style in further detail. A glossary of architectural terms, which should be of special service to the student, has also been added.

The above is the merest *résumé* of Sir Banister's book. There is not sufficient space here to go into it in more detail, but his opinion on the influence of the World War on architecture is extremely interesting " There is no doubt," he writes, " that the World War has influenced every aspect of human life and affected the character of modern architecture, and that the happiness, comfort and well-being of the great mass of the community have now become predominant in determining the direction of future architectural developments."

The value of a sound knowledge of bygone architectural styles is stressed in a chapter on the United States. Sir Banister points out that the novel forms that are being evolved there arise from new conditions, materials and possibilities in design, and these must result in that originality that is much sought after in the modernist school of thought which has set itself against the architecture of precedent and tradition. Architects should not be led astray, however, into thinking that they are better able to produce something original without a study of the best examples that have gone before, for there is real value in tradition, and the architect who is thoroughly conversant with it is more likely to produce original designs than one who has not been so trained.

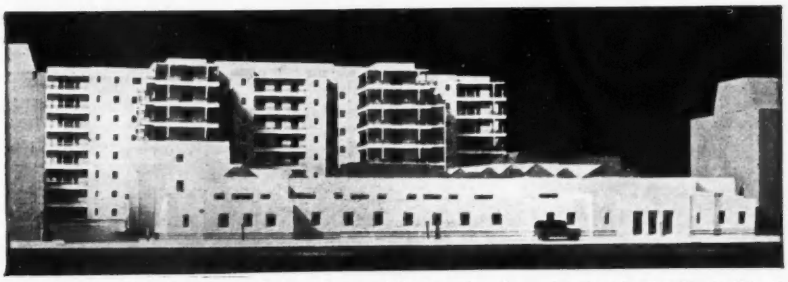
[*From* A History of Architecture.

The Masonic Peace Memorial, London. H. V. Ashley and Winton Newman, Architects.

It was, I think, Victor Hugo who wrote that " Architecture is the handwriting of the human race—the Bible of Stone." Here, then, is the " Bible of Architecture," the most essential book both for the student—a term, alas ! which must include nearly every practising architect—and for the layman.

W. P. K.

A History of Architecture on the Comparative Method. By Sir Banister Fletcher, PP.R.I.B.A. Ninth edition. London : B. T. Batsford, Ltd. Price £2 2s. net.



Hospital for Sick Children, Great Ormond Street, London. E. Stanley Hall, Architect.

PERSPECTIVE SIMPLIFIED

THE author of this book is the teacher of industrial drawing at the Peabody High School, Pittsburg, Pa., and formerly principal of the Hackley Manual Training School, Muskegon, Mich.

His method is based upon the unit cube. This unit is one of the three dimensions of the object, usually the vertical dimension. " The little child playing with his cubical blocks, before he has language to express the idea, knows intuitively when he places the second cube against the first that his structure has become twice as long; likewise, the young student, when he adds the second unit cube to the first, knows that he has represented perspectively a distance twice as great as the first."

This unit cube is the true perspective of a cube drawn under actual conditions, and by its use the learner gets the distances and the proportions of the drawing, without the necessity of at once committing to memory the several definitions involved in the general method of perspective.

The author believes that after diligent use of the unit cube the learner will have acquired the " perspective sense," and thus be able to sketch truthfully without the necessity of this aid.

Perspective Simplified. By Edwin Delos Hoyt, B.S., A.M. London : Chapman and Hall, Ltd. Price 9s. net.

[*From* A History of Architecture.

The Swansea Civic Centre. Ivor Jones and Percy Thomas, Architects.

Waiting hall of the Pennsylvania Station, New York, designed by McKim, Mead and White.

The Merchandise Mart Building, Chicago, designed by Graham, Anderson, Probst and White. It is twenty stories high, and houses more than twenty thousand people.

The Municipal Building, New York, designed by McKim, Mead and White.

CHEMISTS' SHOP AT NEWCASTLE-ON-TYNE

DESIGNED BY PERCY BARTLETT

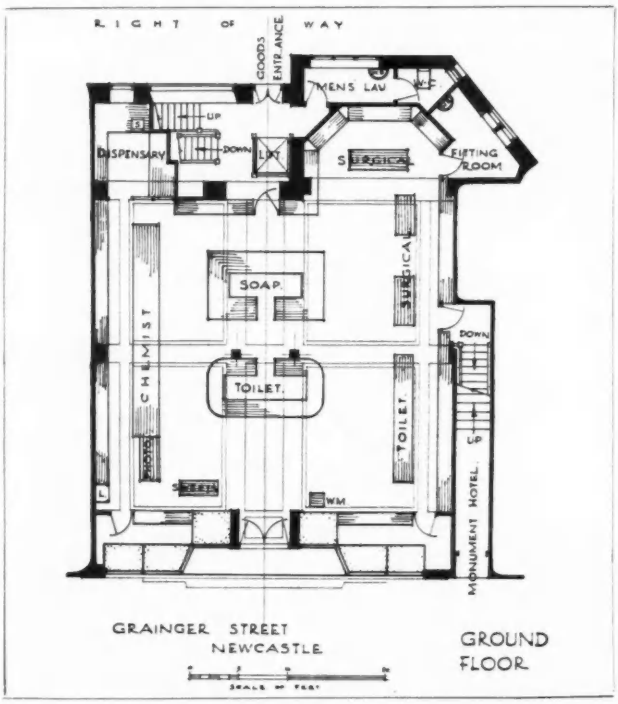
The shop as it appears in daylight. The surround is of German travertine, framing a fascia of glass, with doors and window frames of stainless steel.

THESE premises have recently been modernized for Messrs. Boots, the chemists, and particular consideration was given to the effect of the design of the shopfront after daylight hours, as it is one of those branches of the firm which are never closed, the chemist's and dispensing departments being kept open day and night.

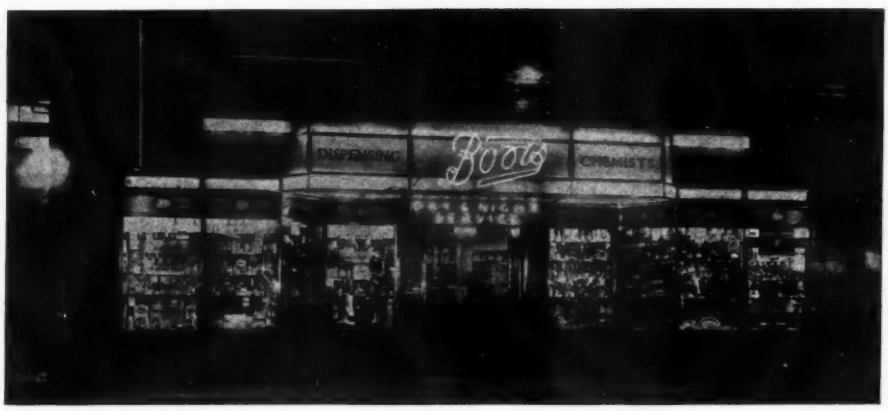
The exterior of the shopfront, the doors, etc., are constructed of stainless steel, which is calculated to catch and reflect every light that plays upon it; the surround is formed of German travertine, and includes a housing for the blind, which is operated by winding gear from the inside.

The fascia is of glass, bearing medallions of the proprietary name, which is also given prominence, together with the words "Day and Night Service" outlined in the familiar bright red of neon signs.

The interior of the shop is carried out in Tasmanian oak, with zebrano veneer enrichments, and the lighting is by means of specially designed "V"-section lighting fittings arranged in groups in the ceiling. The floor is laid with rubber composition flooring.



The ground plan, showing the arrangement of the counters allocated to the various departments. In view of the lack of daylight windows, special light fittings are incorporated in the shop ceiling.



The shop front by night. As this branch is kept open always, special consideration was given, in designing it, to its appearance under conditions of night lighting.

THE SPECIFICATION WRITER

Double "Silence" Window Glazing

BY C. W. GLOVER

THE use of double windows for silencing street noises is quite effective provided the windows are not opened, as it is essential in sound insulation to render the construction reasonably air-tight. Furthermore, in order to prevent direct transmission of noise through the diaphragm-like vibration of the windows, it will be necessary to ensure very rigid construction and to use small panes of comparatively heavy glass.

To prevent the sympathetic vibration of the inner and outer glazing, the outer glass should be heavier than that used in the window on the inside.

Street noises are invariably brought down into the room by reflection from the ceiling, and if a highly-absorbent acoustic material is applied thereto, the noise will be considerably reduced. Opening the window for ventilation may increase the sound by as much as 50 per cent., and a silencer as shown in figure one may be used with advantage.

The noise entering from the street suffers inter-reflection between the absorbent baffles, and is enfeebled by absorption, with the result that the entering sound is reduced by some 80 per cent. The objection to such a silencer is that it is unsightly, dust-collecting and obstructive of light where this is most effective. On the other hand, these silencers have the advantage of portability and are comparatively cheap.

For use in bedrooms at night the sound-proof ventilating window masks shown in figure two are very effective, inasmuch as they permit of continuous ventilation without admitting noise. The air, in passing through the vents, is made to take a tortuous route through sound-absorbing baffles, and a silencing effect is therefore produced.

Figure three (page 650) shows an arrangement of continuous sound-proof windows which are double glazed and fixed, the ventilation being provided through silencers situated between window cill level and the ceiling. The advantages of this form of window are :

1 : Rigid construction, which minimizes diaphragm vibrations.

2 : The provision of double glazing of different weights.

3 : The provision of the maximum glass area.

4. The admission of light near the ceiling, where it is most effective.

5 : The extraction of vitiated air at ceiling level.

6 : The admission of fresh air through

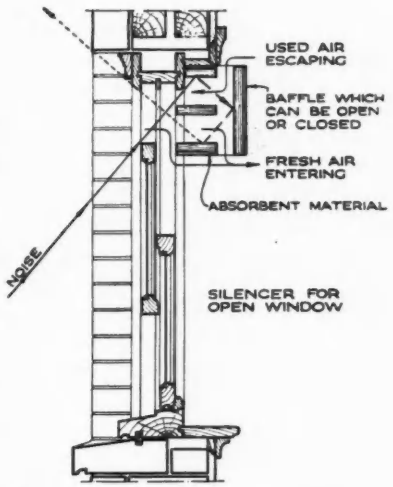


Figure one. Type of silencer for use with open window.

a silent ventilator under the window board behind the radiator.

Figure four (page 651) shows alternative elevation treatments : A is a vertical treatment with fluted continuous windows; B, a horizontal treatment with flat windows, in other respects similar in detail to those shown in figure three.

In each case, of course, the louvres can be of the interlocking snowdrift-preventing type, and can be of metal.

Practical Methods of Waterproofing Basements

BY THEODORE CRANE

(The first portion of this article appeared in the issue for October 28)

MEMBRANE WATERPROOFERS

THE membrane system has been very widely used for many years, and is still a popular choice where high hydrostatic heads are encountered and it is feasible to gain access to the outside of the wall to be waterproofed. There are many cases where this method has been used as an interior application, but the excessive cost of providing a proper seal without puncturing the membrane has resulted in favour of the mortar-coat application where work is to be done from inside.

As in the case of any waterproofing surface, complete continuity is essential; this requirement often results in complicated problems where the membrane must be carried either beneath column bases or up the sides of interior column shafts. Before applying the first layers of felt, jute or cotton drill, which materials are usually used for this purpose, the concrete surfaces are carefully pointed, removing any projection or fins. Various methods are employed for laying the membrane and the number of plies is designed to meet conditions. Of the three kinds of membrane mentioned above, a treated felt is usually the cheapest, but has less elasticity than the other materials. Both the cotton drill and the jute are specially prepared by being saturated with a bituminous mixture, generally used with a very elastic binder, and often being laid in small squares of about 9 sq. ft. and lapped a minimum of about 2 ins. on each side. Most jobs require from three to six plies.

Each layer of felt or other material is pressed into the binder as it is placed; when laid in strips, each ply is lapped 4 ins., with a total minimum lap of 12 ins., irrespective of the number of plies. A mesh joint is generally made at the line between a wall and a floor or between new and old work. The mastic should not only be plastic and stable at all normal temperatures, but should also possess elasticity and be both adhesive and cohesive. Particular care is necessary where pipes pass through

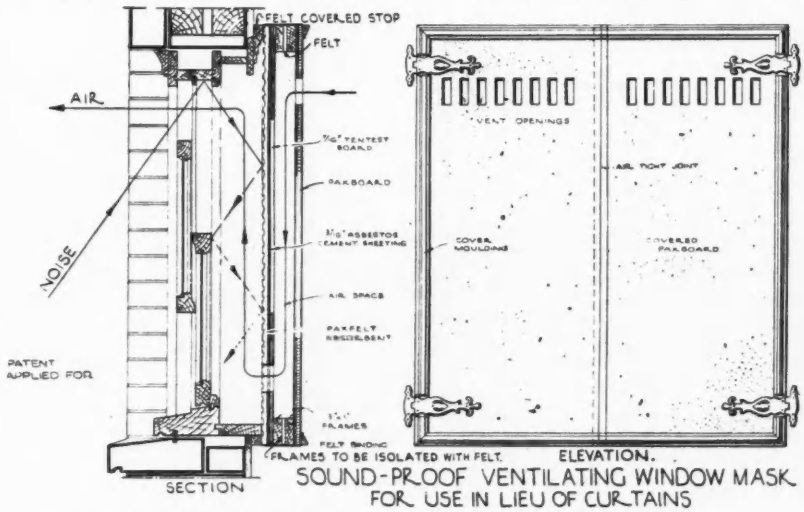


Figure two. Details of sound-proof ventilating window masks.

the membrane, copper or lead flanges being used, extending a distance of 12 ins. into the waterproofing. Where steam pipes pass through a waterproofed wall, a special detail is necessary to provide for heat radiation in order that the pitch or asphalt will not melt.

One of the most widely-used methods of waterproofing concrete surfaces is the application of pulverized iron which, in the form of a powder, is chemically treated to expedite its oxidation. Mixed with Portland cement to a creamy consistency, it is applied by hand brushes. This system is employed for waterproofing the inside faces of foundation walls, swimming pools, and similar structures. The material is usually applied in thin coats worked thoroughly into the surface; from three to five applications are customary, allowing sufficient time between each coat for fairly complete oxidation. A sand-finished appearance may be obtained after the completion of the waterproofing coats by mixing sand with the pulverized iron and Portland cement for the final application. As the efficiency of this method depends upon the completeness with which the iron oxidizes, and the curing of the cement, it is essential that each coat be kept moist until thoroughly hardened. On floors, the finished wearing surface is placed over the waterproofing which, however, needs no protection on side walls, columns or piers.

The same care should be exercised in preparing concrete surfaces to be treated by the iron method as in the case of the cement-mortar coat applications: rock pockets or voids should be filled with mortar, tie wires, or spreaders cut back 1 in. from the surface, laitance removed, and all surfaces thoroughly cleaned twenty-four hours before the start of the operation.

INTEGRAL WATERPROOFING COMPOUNDS

Certain integral waterproofing compounds increase the workability of concrete, thereby assisting toward making the work water-resistant. Some compounds also shorten the time required for hydration. Others, such as the stearates, are of distinct value in lowering the absorption of concrete, stuccoes, or mortar applications. The effect of properly chosen integral waterproofing compounds is to retain the uniformity of the mixed concrete during the process of transportation and deposition, thereby lessening the tendency toward segregation of aggregates or the formation of laitance. Porous concrete, as too often constructed on the average job, readily absorbs water. By capillary action moisture will often rise in a concrete wall considerably above the water level to which it is subjected. In order to overcome this condition the first problem is to obtain as dense a concrete as possible, which not only means a properly graded aggregate and an adequate cement content, but also a strict limitation upon the amount of water used in the mixture.

Reference to any of the well-known charts showing the relationship between the strength of concrete and its water content will indicate that less than one-half of the amount of water used to gain the consistency required on the average job is used by the cement in the process of hydration. The remaining water serves as a lubricant in making the concrete workable and later evaporates, leaving what are generally termed "water voids." Whether we are seeking strength, durability, or

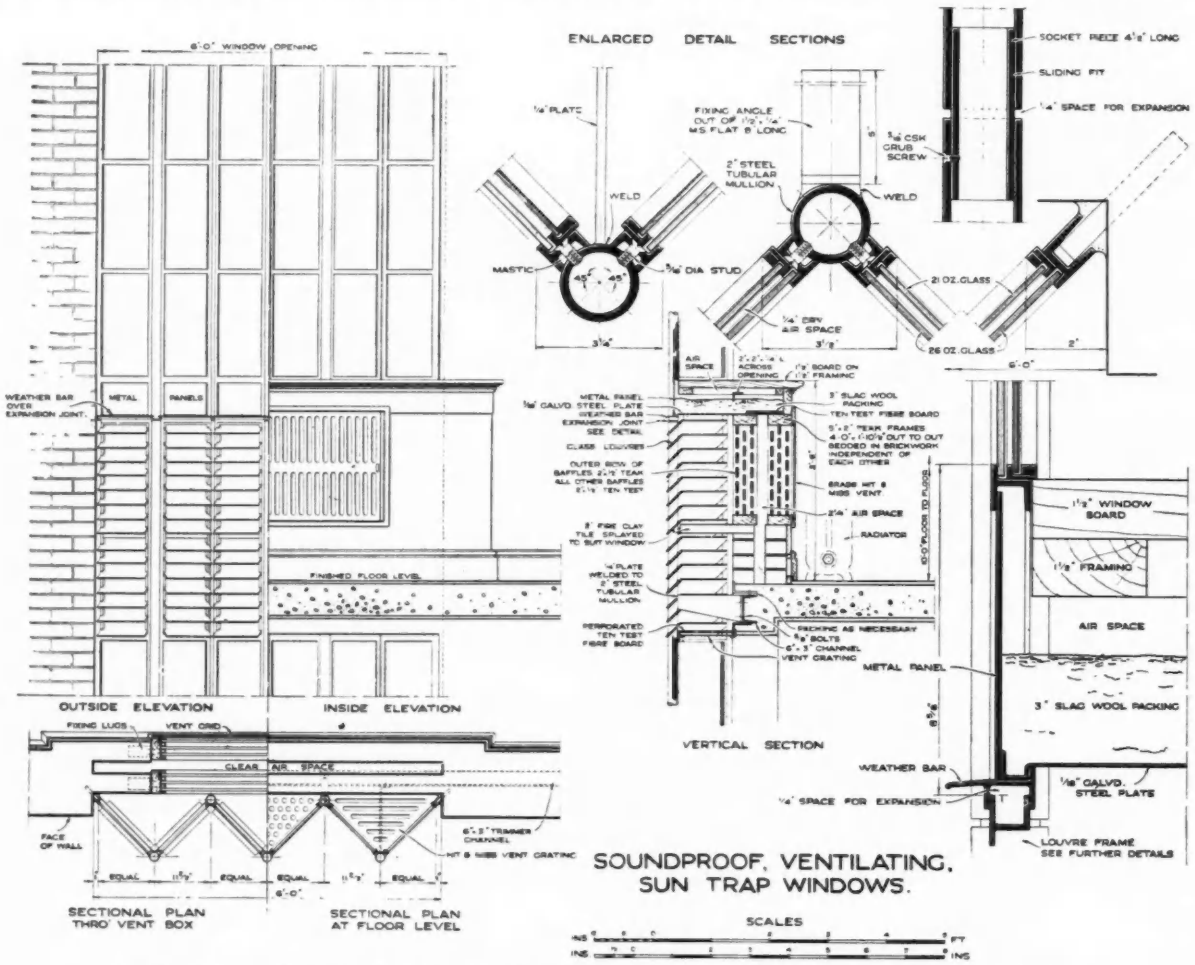


Figure three. Continuous sound-proof windows, double glazed and fixed, ventilated through silencers.

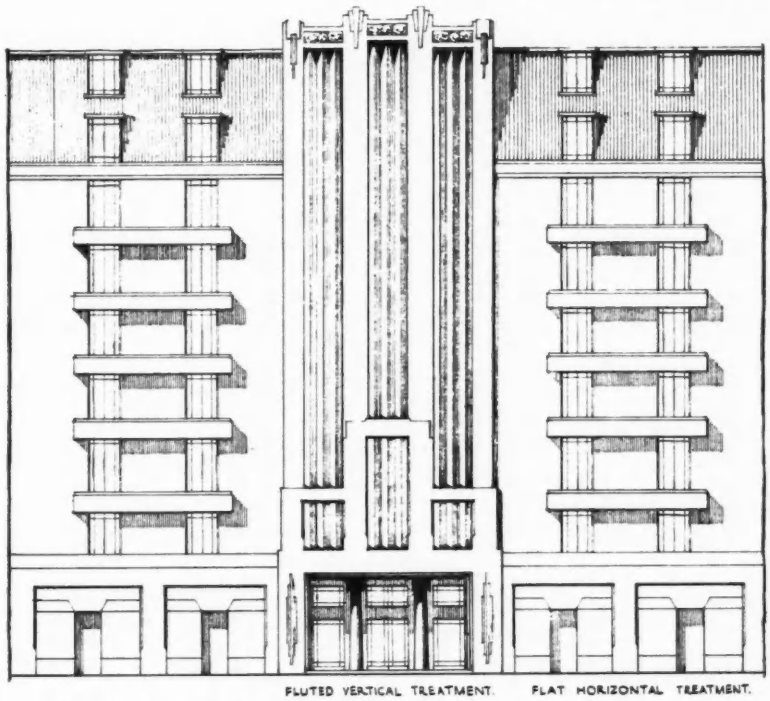


Figure four. Alternative vertical and horizontal treatments of continuous sound-proof windows.

imperviousness to hydrostatic head or the destructive influences of climatic changes, the first requisite is to reduce as far as may be possible, under any specified job conditions, the sum of the air and water voids in the concrete.

As it is necessary to accept an excess of water in order that the plastic mass may be placeable, there appears to be a real function for certain waterproofing compounds which tend to destroy the capillarity of the hardened concrete; in other words, to render the minute pores of the mass less capable of absorbing water through capillary action. For this purpose both the ammonia and calcium stearates are used. In the liquid state such chemicals are held in suspension in the mixing water; when used as a powder they are mixed dry with the cement.

One of the most successful methods of waterproofing is a combination of the cement-mortar coat with the iron process. The latter, when used alone, is applied upon a smooth concrete wall without the necessity of chipping, and is largely dependent upon the character of the concrete beneath or the care with which repointing is done. The writer has found it absolutely ineffective against moderate pressure when applied over structural walls composed of honeycombed concrete. Where the two methods are used together the surfaces are thoroughly chipped, carefully cutting out and repointing all defective concrete, tie wires, spreaders, laitance, or other imperfections. The repointing is done with a mixture of iron, sand and cement, and the surfaces coated with this same mixture immediately prior to the application of the first plaster coat.

Whatever method of waterproofing may be chosen it is essential that the work be done by experts, as success is dependent upon knowledge of the workmen, their care and thoroughness. Generally speaking, the membrane method is of particular application where the structure is subjected to vibration or volumetric changes due to fluctuating temperature. On building foundations the cement-mortar coat, applied on the interior, will be equally effective, much less costly, and more easy to repair in case of local failure. The iron method is of general application where water pressures are not excessive, and can be used to advantage in more difficult situations as a valuable adjunct to the plaster-coat applications. Integral waterproofing compounds are of value in lowering the permeability of poor concrete, but are less effective when used with rich mixtures. As plasticizing agents certain types are of value in increasing workability and act as a form of insurance for obtaining a better quality of work.

[The foregoing article is reprinted from *The Contract Record and Engineering Review*, Toronto, Canada.]

THAT coal cooking apparatus is falling out of use in America and is now only used for country places and for central stoves in hotels and restaurants where French chefs are employed, is the conclusion of Mr. Stanley J. Benham, in a paper read before the Institution of Heating and Ventilating Engineers. On the other hand, there has been an undoubted advance in the use of oil fuel for cooking. Gas-cooking apparatus is a different thing altogether from what it was ten years ago, and almost all large kitchens are partly or wholly so equipped. The average cost of the coal range in fuel, in an English hotel, was £36 10s. per quarter, whilst the average cost of the gas worked out at £37 18s. per quarter. On the other hand, the saving in labour has considerably outbalanced this difference, and there are great advantages in the absence of dirt and saving in coal storage. In America, the great feature in most kitchens is the use of bright Monel metal for all sorts of purposes.

QUESTIONS THAT ARISE

Horizontal Sundials

R. S. W. writes : "*Could you inform me what variation there would be in the setting out of a horizontal sundial for use in Belfast? Would the variation be too great to justify a standard sundial presumably based on Greenwich?*"

The expression "standard sundial" is not understood. For ornamental purposes, at times not more than two or three hours from noon, a dial graduated for the latitude of Greenwich might be regarded as satisfactory, though it would read, of course, local time at Belfast (not Greenwich time). But if the indications of the sundial are to be regarded as anything more than of the roughest, the stylus must be set to point accurately to the celestial pole, and the graduations of the dial (which depend partly on the elevation of the celestial pole as well) must be calculated for the latitude of the place at which the dial is to be erected (Belfast: 54° 35′ N.).

Your correspondent should be referred to the article "Dial and Dialling" in the *Encyclopædia Britannica*.

D. J. R. EDNEY (SECRETARY, ROYAL OBSERVATORY, GREENWICH)

Sound Deadening

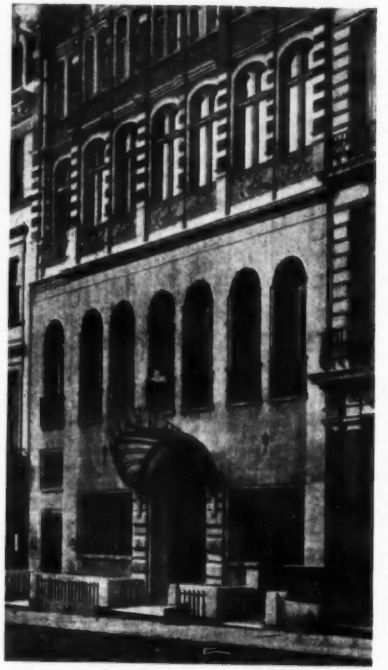
C. and S. write : "*We have a client who proposes to use dried seaweed for sound deadening. We fancy we have read in* THE ARCHITECTS' JOURNAL *of the use of this. Is it at the B.B.C.? Can you kindly enlighten us?*"

Eel grass in the form of a quilt or blanket is frequently used both as a sound insulator in walls, floors and ceiling, and also as a sound absorbent on walls and ceiling for the reduction of reverberation. It has been used in hundreds of buildings in London. B.

Horace Trumbauer, C. C. Zantzinger, and C. L. Borie, Junior, architects.]
A night view of the Philadelphia Museum of Art. The architects have aimed at restoring to classic architecture its original brilliant colouring. The roof of the above building is of turquoise tiles; and the pediment groups, of polychrome faience, are being worked out with the greatest care.

FAIENCE IN ARCHITECTURE

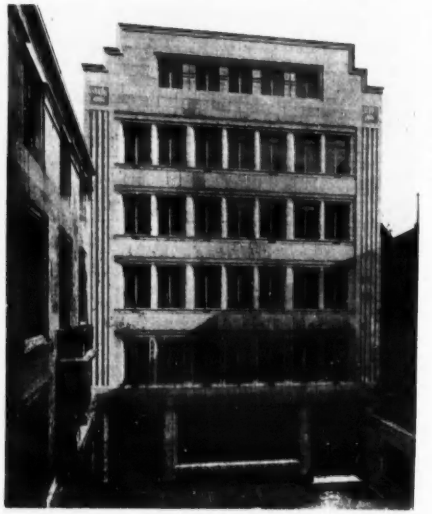
THE five examples of the uses of faience for modern buildings illustrated on this page are reproduced from an article by Mr. Christopher Hussey, in the current issue of *The Architectural Review*, entitled "The Æsthetics of Faience Architecture." Mr. Hussey points out that faience "enables pure and permanent colour to be introduced into architecture for the first time in modern history. For any kind of repetitive work, whether plain or decorated, it is the proper and most economical material. It is about two-thirds cheaper than any masonry that can approach it in durability. And of all building materials it is the most pliable.



[*Durand and Allison, architects.*
The Ambassadors' Club, London.

W. A. Johnson, architect.]
The Sheffield and Ecclesall Co-operative Society's Stores.

[*Sloane and Robertson, architects.*
Chanin Building, New York, showing ornamental band course.



[*Richardson and Gill, architects.*
Bury Court House, St. Mary Axe, London.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council :

R.I.B.A. Statutory Examination for the Office of District Surveyor in London, October, 1931 : The Board of Architectural Education reported that four candidates had sat for the Examination and on the recommendation of the Board the following two candidates were passed : Messrs. Robert Rodolph Sorrell Dean and Walter Albert Scott.

R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities, October, 1931 : On the recommendation of the Board, the following candidate who sat for the examination was passed : Mr. Norman Smith.

Amendments to the R.I.B.A. Regulations for the Conduct of Architectural Competitions : The amendments to the R.I.B.A. Competition Regulations, which were provisionally approved by the Council on July 6, were duly ratified.

Revision of R.I.B.A. Bylaws : (A) It was officially reported to the Council that the Privy Council had approved the amendment to the Licentiateship Declaration which had been adopted at the general meetings on June 1 and June 15.

(B) It was agreed to take the necessary steps to amend the Forms of Declaration to be signed by members on their election by the omission of the words " in consideration of my having been elected."

Group Pension Scheme for Architects : The group pension scheme for architects, prepared by the Insurance Committee of the Architects' Benevolent Society, was approved, and the Council agreed to accept the trusteeship of the scheme.

Committee on Regulations for Reinforced Concrete : The President reported that as a matter of urgency he had nominated Mr. Maxwell Ayrton, F.R.I.B.A., and Mr. A. Alban H. Scott, F.R.I.B.A., to represent the R.I.B.A. on the Committee set up by the Building Research Board of the Department of Scientific and Industrial Research on the use of reinforced concrete in building. The President's action was approved.

Proposed Panel of Consultants on Building Materials : The President reported that he had accepted the invitation of the Advisory Council of the Department of Scientific and Industrial Research to serve on a Committee appointed to advise on the selection of consultants on building materials. The President's action was approved.

Membership of the Council : The Council accepted with regret the resignation from membership of the Council, due to ill-health, of Mr. E. T. Johns, representative of the East Anglian Society of Architects, and directed that a letter of sympathy be sent to Mr. Johns.

The Fellowship : The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925 : Messrs. John F. Matthew, L.R.I.B.A. (Edinburgh); J. Alistair Ross, L.R.I.B.A. (Inverness).

Reinstatement : The following ex-members were reinstated : As Licentiates : Messrs. Walter W. Bull and John G. D. Hoets.

Transfer to Associateship : The following architect was transferred to the Associateship under the provisions of the Supplemental Charter of 1925 : Leslie M. Evans.

Transfer to the Retired Members Class : The following members were transferred to the Retired Members Class : As Retired Fellow : Walter Dewes (F. 1925). As Retired Associate : Henry T. Fowler (A. 1904). As Retired Licentiate : Henry S. Benison (L. 1911).

Election of Students : The following Probationers were elected as Students of the R.I.B.A. :

Architectural Association

Balstone, J. M. L.	Hutt, H. M.
Banks, R. L.	Johnson, C. J.
Bird, G. P.	Leech, B. L. C.
Bond, R. O.	Maré, E. S. de
Brett, R. K.	Moira, R. E.
Carden, A.	Oldacres, R. M.
Cornu, P. E.	Pryce, L. O.
Defries, J. G.	Tuely, R. C.
Dowling, E. T.	Welstead, E. R.
Epps, C. E.	Wilson, R.
Fleming, L. H.	Winser, J. K.

University of London

Earle, D. C.	Morris, R. S.
Finch, R. H. C.	Packer, M. R.
Richards, F. J. M.	

University of Cambridge

Bravington, F. B. C.	Hurd, R. P. A.
Burton, P.	Smith, J. R.
Hornblower, G. E. P.	Swan, S. C.
Watson, W. E.	

Armstrong College, Newcastle-on-Tyne

Bruce, G. R.	Grieve, M. N.
Couves, D. L.	Peake, C. R. W.
Scott, W. J.	

Glasgow School of Architecture

Campbell, J.	McBain, W. O.
Carrick, J. A.	Steele, D. R.
Sutherland, A. C.	

Bombay School of Architecture

Chemburker, V. N.	Kasulwar, C. P.
Dadarker, G. S.	Palshikar, V. S.
Desai, M. G.	Patki, J. G.
Griffin, H. H. M.	Sane, R. D.
Kadri, S. M.	Shroff, N. B.

Liverpool School of Architecture

Hope, A. H.	Lake, H. J.

R.W.A., Bristol

Ayre, E. W.	Fry, A. F.

Also : Ayres, N. D. (*Welsh School of Architecture*); Davies, M. M. J. (*University of Sheffield*); Howe, J. (*Polytechnic, Regent Street*); Simms, J. (*Northern Polytechnic*); Thynne, T. (*Special Exemption*); Todd, S. H. (*University of the Witwatersrand*).

MR. WORTHINGTON'S PRESIDENTIAL ADDRESS

In the course of his presidential address to the Manchester Society of Architects, held on November 4, Mr. J. Hubert Worthington, F.R.I.B.A., said there was, at this time, a danger that panic measures might have a very serious effect on the building trade. It was natural and inevitable that many building schemes would be held up, at any rate for this winter, but in any scheme for national regeneration the building trade must have consideration. The Ministry of Labour stated that on September 21, 174,000 insured building trade operatives were out of work. Many of these were highly skilled tradesmen, and even these were only a proportion of those allied workers in the making of materials for building who were in the same condition. One must add to this architectural draughtsmen of skill and training. Of forty students passing out of the Architectural Association School in London last session only two had got jobs in offices.

A vigorous appeal for a sane view in the matter should be made to all possible building owners, above all to public authorities and those who controlled housing, education, and public health. No industry should be allowed to stand still. If so, the whole nation would suffer.

HANTS AND ISLE OF WIGHT ARCHITECTS

The first general meeting of the 1931–32 session of the Hampshire and Isle of Wight Architectural Association was held at Winchester, on October 16.

After the general business had been dealt with, Mr. Ingalton Sanders, F.R.I.B.A., in his presidential address, said he had been asked to make a few remarks about the trend of modern architecture. Much in modern architecture bore the stamp of revolution, harsh, unbending, sternly utilitarian, divorced from all tradition. But might we not welcome it; might we not see in it architecture in the pangs of travail in the birth of a new style which should evolve from the crude forms we now saw?

He thought the thing we had to fear was that spirit which some people displayed when they mistook rudeness and abuse for strength of character, or that type of architecture which claimed to be a work of genius because it was *outré* or an outrage to artistic taste. Someone had written—he believed it was Carlyle—that genius was the art of taking infinite pains, and in modern work one could call to mind many

[Richardson and Gill, architects. Bury Court House, St. Mary Axe, London.
[Sloane and Robertson, architects. Chanin Building, New York, showing ornamental hand course.
W. A. Johnson, architect.] The Sheffield and Ecclesall Co-operative Society's Stores.

instances where such genius was apparent. He knew no better instance than the noble work of Sir Giles Gilbert Scott in Liverpool Cathedral. It was not, like many buildings, an inspiration of last night, transferred to paper this morning and erected in six months.

That building, which was only half completed, had been in progress for some thirty years, and a lifetime's work had been consecrated to its structure. If we had enjoyed the privilege of studying it, we would be struck by the evolution in the mind of the architect. The early part of the work (he referred, of course, to the Lady Chapel) was itself a beautiful structure, but it was essentially traditional, and in that respect differed from the main structure. It was in the latter work that his true genius appeared in a building essentially modern in its style. Not modernity in the crude form in which we sometimes saw it—bald, naked, ruthlessly divorced from all that was gentle (merely because that happened to be traditional)—but modernity, clothed, majestic, beautiful.

He believed that in such buildings as that lay the true destiny of modern architecture.

Mr. J. Arthur Smith, F.R.I.B.A. (past-president), proposing a vote of thanks to Mr. Sanders, said they all had their views on modern architecture; he agreed to a very large extent with what the President said, though he was certain many would differ on various points.

Mr. T. D. Atkinson, F.R.I.B.A., seconded the vote of thanks, and among the other speakers were Messrs. A. J. Sharp, J. Harrison, H. S. Sawyer, and A. L. Roberts.

ARCHITECT AND ENGINEER

Professor Patrick Abercrombie, F.R.I.B.A., in his presidential address to the Liverpool Architectural Society, on October 28, asked: Was there an alternative to the mechanical mixture or chemical compound of architect and engineer? A Spanish writer, Tuduri, propounded one which the lecturer suggested was worth careful consideration, namely, a separation into two camps of architecture: the liberal, imaginative art of harmony and stability and the mechanical art of building based on necessity and utility. For the latter art he had invented the name "actar."

Tuduri's argument was that at present architects and actarians were stultifying and destroying each other's art by producing hybrid forms—the architect straining towards mechanical movement and the actarian still hampered by vague architectural ideals. The error of the age, in Tuduri's opinion, was the mixture of architecture and mechanism, the union of proportion with essential mechanical form.

There were, suggested Professor Abercrombie, definite advantages in making this distinction. He thought it would enable us to take a broader view and avoid a battle between the architect and the engineer, each of whom had a distinct sphere. They must, however, zone for architectural and actarian building. Much that was now done as a sort of shamefaced architecture would be much better in every way as simple actar—a great deal of housing, for example. Let them go in wholly for the elementary solution, but keep the results segregated in zones.

Under this system we should lose much of our confusion of thought, and there would be a regrouping of the camps, some who now called themselves architects finding a more congenial atmosphere among the designers of aeroplanes and motor-cars.

CHANGING ENGLAND

The public which has enjoyed, week by week, Mr. Hanslip Fletcher's impressions of many and various buildings, ancient and modern, on a page of newsprint, is probably content to view those sketches as of a transient value. But such sketches are of inestimable worth as a record, not simply of what some part of London or some other spot *was* in such and such a year, but of what it *looked like*, and what it *felt like*. The impression received by the camera, or even by the eye, of the etcher or painter who is primarily a building-portraitist, does not produce quite the same sort of record as Mr. Fletcher's sketches. Some of these were recently shown on a series of lantern slides when he gave a talk at University College, Gower Street, on the subject of "Changing London."

The lecture in the main may have suffered somewhat from being nominally addressed to students of the School of Librarianship; but it gained thereby in the fact that several charming sketches of Oxford and Cambridge college library interiors were included in the series on the screen. An otherwise equally irrelevant reference was made to the importance of the "architecture" of books themselves—their binding and protective covering requiring sound foundation and construction and good materials, as well as presenting opportunities for beauty of external design.

Another reference, more applicable to changing England as a whole than to London in particular, concerned the advantages of the present-day multiplicity and efficiency of public libraries; and a timely word of commendation was given for the use of fine old buildings, otherwise threatened with decay or demolition, for the housing of public collections of books, as in the case of Panshanger and Old Charlton. Such utilization of our unemployed mansions is, of course, both a double economy and a double benefit, and the buildings provide an atmosphere of quiet dignity and peace—a valuable adjunct to study not seldom absent from our super-efficient up-to-date warehouses of information.

C.

ARCHITECTS' AND SURVEYORS' VISIT TO TILBURY DOCKS

A combined visit to Tilbury Docks, arranged between the West Essex Chapter, Essex, Cambridge and Herts Society of Architects, and the Rural Essex Sub-Area Branch of the Chartered Surveyors' Institute, took place on October 29.

About seventy members and guests of the two societies met at Tilbury Station at midday, and were greatly interested in the new station, embankment and ferry approach of the L.M. and S. Railway.

The party was officially received by Mr. B. E. Daniel, Superintendent of the Docks, who conducted the party over the new Baggage Hall, designed by Sir Edwin Cooper, A.R.A., and the landing stage.

An adjournment for luncheon was made to the Tilbury Hotel, owned by the Port of London Authority. The chair was taken by Mr. A. S. Belcham, F.S.I., supported by Mr. T. P. Pratt, F.S.I., representing the survevors, Mr. T. H. B. Scott, F.R.I.B.A., Chairman of the West Essex Chapter, and Mr. S. Phillips Dales, F.R.I.B.A., President of the Essex, Cambridge and Herts Society of Architects.

A vote of thanks was enthusiastically given to Mr. B. E. Daniel for all he had done in making the visit a success, and he was asked to convey the appreciation of the company to the Port of London Authority for their kind invitation. Mr. Daniel replied.

After the luncheon, a tour was made of the docks generally, and especially the new dry dock, under the guidance of Captain Course, the assistant dock-master, who described the work of the docks, the technicalities, and the enormous amount of goods and other traffic dealt with.

Captain Course, after this; conducted the party over the s.s. *Cathay*, and again showed himself a very competent guide in describing the very intricate working of the vessel. The party broke up about 5 o'clock.

The arrangements and organization of the visit were made by the hon. secretaries of the two societies, Mr. W. M. Balch, P.A.S.I., for the surveyors, and Mr. Arthur C. Russell, L.R.I.B.A., for the architects, aided by Mr. S. A. Hill-Willis, Surveyor to the Tilbury Council.

MODERNISM

Mr. C. A. Harrington, the president of the Architectural Association of Ireland, lecturing at the opening meeting on "This Modernism," said there was no doubt that the use of reinforced concrete had largely influenced the development of the modern style of architecture. Cost was the dominating factor, and the necessity of providing inexpensive and hygienic buildings was an additional problem the architects had to face.

In Germany, Austria and France, churches had been built so far removed from general principles that it was almost difficult to visualize their sacred purpose. The new Catholic church at Prague had all the appearance of the entrance to a factory. In Cork, a church had been built to the designs of an American architect, which was so far apart from anything yet attempted in Ireland as almost to take the breath away.

No matter how the modern movement in architecture might progress, there were architects of the old school who held that it was only a passing phase. Little had been done as yet in Ireland towards the advancement of the new architecture.

THE GOTHIC REVIVAL

At a meeting of the Hull College of Art and Crafts, Mr. G. Dudley Harbron, F.R.I.B.A., lecturing on "The Early Days of the Gothic Revival," stated that Gothic was deemed to be typically British, and the genuine later periods to represent the date when architecture had declined under foreign influences. It was patriotic, and it promised a return to the condition of a "Merry England." It was scientific in that its graces arose from construction. A Frenchman, Augustus Pugin, saw the need for accurate drawings of genuine Gothic architecture, and gave the movement its first antiquarian trend. His son, Wilby Pugin, spent his life in furthering the revival by his writing and through his works. Wilby Pugin abandoned the reference to the last Gothic as examplar and selected that which he deemed the best. He died at forty, after a life of unparalleled exertion for Christian art. With his death in 1851, the early history of the revival closed.

At the close of the lecture, Mr. Allanson Hick proposed a vote of thanks to Mr. Harbron. Amongst those present were the following:

The Principal, Mr. E. Sallis Benney, A.R.C., Mr. F. J. Horth, F.R.I.B.A. (who presided), Mrs. Dudley Harbron, Mr. and Mrs. Allanson Hick, Mr. A. O. V. Pearson, Mr. Harold Horth, A.R.I.B.A., and Miss Verdier.

I.H.V.E. EXAMINATIONS

Examinations for admission as graduates and associate members of the Institution of Heating and Ventilating Engineers are held at suitable centres in January, May and September each year. Intending candidates should apply to Mr. H. B. Watt, Secretary, 12 Russell Square, London, W.C.1.

PUBLIC WORKS EXHIBITION

The Public Works, Roads and Transport Congress Exhibition is to be held at the Royal Agricultural Hall from November 16 to 21, 1931.

COMPETITIONS OPEN

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions were obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions were obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

ANNOUNCEMENT

The Rudolf Mosse Buchverlag (Jerusalemstrasse 46, Berlin, S.W.19) will shortly publish the latest work of the well-known architect, Erich Mendelsohn, *Neues Haus: Neue Welt* (*The New House: The New World*), in which will be shown, from an erected example of a country house, the radical changes in the habits and living accommodation of modern people. This outstanding subject is considered in all its characteristics, from general arrangements down to technical details.

THE ARCHITECTS' DIARY

WEDNESDAY, NOVEMBER 11

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of members' holiday sketches and photographs.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Palaces and Churches of Venice." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Planning and Lettering of Public Notices and Signs." By George Mansell. Chairman: The Mayor of Westminster. **8 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Hereford Bridges." By G. H. Jack, F.R.I.B.A. **6 p.m.**

THURSDAY, NOVEMBER 12

SCIENCE MUSEUM, (Lecture Theatre), South Kensington, S.W. 7. "Sheet and Plate Glass." By R. S. Taylor. **4.45 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Ancient Coffers and Cupboards." By Fred Roe, R.I. **7.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Hardwoods." By Alexander Howard. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, NOVEMBER 13

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "The Early Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Midland Counties Branch. At the Birmingham Chamber of Commerce, 95 New Street, Birmingham. "The Design of Column Bases in Single-Story Buildings." By G. J. Voce. **7 p.m.**

SATURDAY, NOVEMBER 14

Sunrise, 7.13 a.m. Sunset, 4.15 p.m.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. London and Home Counties Branch. Visit (afternoon) to the Grand Priory in the British Realm of the Hospital of St. John of Jerusalem, Clerkenwell.

MONDAY, NOVEMBER 16

R.I.B.A., 9 Conduit Street, W.1. "Modern European Architecture." By H. S. Goodhart-Rendel, F.R.I.B.A. **8 p.m.**

TUESDAY, NOVEMBER 17

LONDON HAMPSHIRE SOCIETY. At the R.I.B.A., 9 Conduit Street, W.1. "Abbeys and Monasteries of Hampshire." By Arthur J. Mason. **8 p.m.**

WEDNESDAY, NOVEMBER 18

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Later Renaissance in Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The R.S.A. Competition of Industrial Designs, 1931." By P. H. Jowett, A.R.C.A. Chairman: Arthur J. Davis, F.R.I.B.A. **8 p.m.**

LONDON SOCIETY. Visit to the Pre-Fire Church of St. Andrew Undershaft, corner of Leadenhall Street and St. Mary Axe, E.C.3. **2.30 p.m.**

THURSDAY, NOVEMBER 19

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Evolution of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Temple Tomb of the House of Minos and the Private Chapel of its High Priests." By Sir Arthur Evans. **8 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Decoration the Background for Furniture." By C. A. Hindley. **7.30 p.m.**

FRIDAY, NOVEMBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At the School of Art, Aberdeen. "Lettering and Scriptwriting." By Principal Fraser.

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. Presidential address by Dr. R. C. Maxwell, O.B.E. **6 p.m.**

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Discussion on "New Houses for Old." The new all-British Housing Film will also be shown and described by Miss A. M. Lipton and Miss K. England. Chairman: The Rt. Hon. Lord Balfour of Burleigh. **5 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Evolution of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, NOVEMBER 21

Sunrise 7.26 a.m. Sunset 4.5 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Fourth of five non-technical lectures on Present-Day Architecture. "Places for Recreations." By J. Murray Easton, F.R.I.B.A. **3 p.m.**

LONDON SOCIETY. Visit to Fulham Palace. **2.30 p.m.**

MONDAY, NOVEMBER 23

LONDON SOCIETY. Visit to the works of Chappell & Co., Ltd., 19 Ferdinand Street, Chalk Farm Road, N.W.1. **2.30 p.m.**

LAW REPORT

Application by Mrs. A. E. H. Menke re Law of Property Act—Chancery Division. Before Mr. Justice Maugham

THIS application by Mrs. Menke, the owner of certain freehold premises and land known as Sunnyfield, West Heath Road, Hampstead, raised a very interesting point of law under section 84 of the Law of Property Act, 1925.

Mr. Gavin Simonds, K.C., for Mrs. Menke, explained that under subsection 2 of section 84 of the Act, the Court had power to declare on the application of any person interested, whether or not in any particular case any freehold land was affected by restrictions imposed by any instrument, the nature and extent of the restrictions, and whether the same were enforceable and by whom.

In the present case his client was seeking a declaration that no part of her property, Sunnyfield, was now affected or bound by any of the restrictions imposed by a conveyance of the Ecclesiastical Commissioners of April, 1873, which she held.

Here, a large part of the property came under the restrictions, with the result that the premises were prevented from being used otherwise than as a private residence. His client had been unable to find a purchaser for the property as a private dwelling house, owing to its size and cost of upkeep, and the restrictions.

Mr. Waite, for the Ecclesiastical Commissioners, said they no longer claimed that the covenants were enforceable.

Mr. Simonds said there was no opposition to the application.

With regard to the point as to whether there had ever been a building scheme, counsel said he was in a position to satisfy the Court that there never had been any such scheme affecting this property which entitled anybody to enforce the covenants. Neither could anyone be discovered who could say that they had an interest in enforcing the covenants.

His client was desirous of dealing with the estate in the market and developing it, and he therefore sought the declaration of the Court binding all persons, so that his client might not be apprehensive in the future.

His lordship said he would exercise his power under the Act, and declare that this freehold property was no longer affected by the restrictive covenants contained in the Ecclesiastical Commissioners' conveyance of April, 1873.

In the course of his judgment, his lordship said it appeared to him that every effort had been made to bring before the Court any person who had any probable interest in opposing the declaration now sought. Further, he did not think he ought to refuse the application because some person not communicated with was not before the Court. In his opinion there never had been a building scheme affecting the property, of which the applicant's house and grounds formed part. Here, in the absence of any express assignment or benefit of the restrictive covenants to purchasers of adjoining land from the Ecclesiastical Commissioners, there was nobody to whom that benefit could pass, and under these circumstances he saw no bar to his acceding to the application of Mrs. Menke.

TRADE NOTES

Messrs. Holophane, Ltd., of Elverton Street, Westminster, S.W., have recently issued a booklet illustrating and describing the Hedralite system of fitting construction. This Hedralite fitting, it is claimed, embodies an entirely new and original method in the construction of lighting fittings. The principle involved is the adoption of a series of geometrically-shaped prismatic glass panels, by means of which fittings of various designs and sizes may be built up. The system employs four distinct geometrical figures — squares, rectangles, right-angled triangles and equilateral triangles, the dimensions of each bearing a definite relation one to the other. Coincident with the Hedralite system of prismatic glass panels, the firm has also developed a new method of metal fitting construction. This embodies a jointing lock, consisting of die-cast corners with specially constructed metal straps of standard lengths, by the combination of which metal fittings of various designs and sizes may actually be built up from the finished parts. The Hedralite system can be adapted in myriad shapes and sizes. It can be used not only for pendant fittings but also for close ceiling and wall fittings, etc.

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Messrs. W. T. Henley's Telegraph Works Co., Ltd., have recently opened a new stores depot at 31-33 Gwyn Street, Bedford. Mr. J. M. Faulkes will act as the firm's Bedford District branch manager. The telephone number of the new stores is Bedford 3566, and the telegraphic address Henletel Bedford. Stocks of cables, wires, flexible cords, jointing materials, engineering dept. supplies, etc., are now obtainable from the new Bedford stores. Mr. E. J. Pond, who, as Birmingham branch manager, has had control of the firm's business in the Bedford district for the last thirty-one years, will continue to supervise in the capacity of Midland Area Superintendent.

*

Mr. N. E. Thompson, who was a member of the advertising staff of THE ARCHITECTS' JOURNAL for the past two years, has now joined the India Rubber, Gutta Percha and Telegraph Works Co., Ltd., of Aldwych House, W.C.2, as their architectural London representative for their "Silvertown" rubber flooring.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

New Showrooms and Offices for Crane-Bennett, Ltd., 120–121 Pall Mall, S.W. (pages 634–638). General contractors, Holloway Bros. (London), Ltd., who were also responsible for the foundations. Sub-contractors : Redpath, Brown & Co., Ltd., steelwork; Nine Elms Stone Masonry Works, stonework; Crittall Manufacturing Co., Ltd., metal casements; E. R. Broadbent, carving; H. T. Jenkins & Son, Ltd., marblework; Art Pavements and Decorations, Ltd., terrazzo; Birmingham Guild, Ltd., wrought-iron balustrades; Waygood-Otis, Ltd., electric lift; the Neon Sign Co., illuminated sign; Higgins and Griffiths, Ltd., electrical work; J. Jeffreys & Co., Ltd., hot water, heating and ventilation; Stitson, White & Co., Ltd., plumbing; Acme Flooring Co., Ltd., wood flooring; Morris-Singer, Ltd., bronze name plate; Nicholls and James, Ltd., special furniture; Johnson, Poore & Co., Ltd., office furniture; Comyn Ching & Co., Ltd., door furniture; Thomas Elsley, Ltd., metal grilles and special furniture; Salter, Edwards & Co., Ltd., asphalt; Berry and Roberts, Ltd., wall paper; Luxfer, Ltd., pavement lights ; London Brick Co. and Forders, Ltd., slotted bricks ; Brookes Ltd., white glazed bricks ; Standard Cork Co., cork slabs ; Thomas Elsley, Ltd., bronze work.

House, Woodside Avenue, Finchley (page 639 and supplement). General contractors, Chessums, Ltd. Sub-contractors : Roberts Adlard, Ltd., tiles; Jos. F. Ebner, wood-block flooring; Pithers Radiant Stoves, Ltd., central heating; Bratt, Colbran & Co., Ltd., grates; T. Clarke & Co., Ltd., electric wiring; City Iron Co., Ltd., sanitary fittings; A. E. Davis, door furniture; Crittall Manufacturing Co., Ltd., casements.

Boots Shop Premises, 67–9 Grainger Street, Newcastle-upon-Tyne (page 648). General contractors, F. J. Hepple, Ltd. Sub-contractors : Redpath, Brown & Co., Ltd., structural steel; F. F. Docking & Co., central heating; General Electric Co., Ltd., electric light fixtures; Matthews and Yates, Ltd., ventilation; Artistic Blind Co., patent blind; John F. Shackleton & Co., Ltd., German travertine; Ruboleum, textiles; Boots shopfitting dept., shop-fittings and Staybrite front ; W. J. Furse & Co., Ltd., goods lift; Claude General and Neon Lights, Ltd., signs.

Article on double "silence" window glazing (pages 649–650). The silencers first referred to are obtainable from Heat and Sound Insulation, Ltd.; the window masks from Messrs. Buchanan Acoustics (European), Ltd.; and the sound-proof windows from Messrs. Mellowes & Co., Ltd.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. Hardman has lodged plans with the BARKING Corporation for the erection of a cinema and sixteen shops in Longbridge Road and Upney Lane.

The Roman Catholic authorities have acquired a site in Hewett Road on the BARKING section of the Becontree estate for the erection of a church and school.

The BARKING Education Committee has obtained sites on the Barking section of the Becontree estate for the erection of two elementary schools.

Plans passed by the BARKING Corporation: Additions to factory, Bye Pass Road for Messrs. Scoffin and Willmott; extensions to factory, for Messrs. Gross, Sherwood and Heald, Ltd.; fifty-one houses, Thornhill Gardens, for Mr. J. R. Leftley; factory, River Road, for Messrs. Orrock & Co.; two blocks of houses, Ripple Road estate, for Messrs. Lord and Mellowdew; eighteen houses, Tanner Street, for Eastern Development Co.; house, Rippleside, for Mr. S. Vanables.

Plans passed by the BRENTFORD AND CHISWICK U.D.C.: Alterations and additions, 282 High Road, for Messrs. Boots, Ltd.: eight houses, Grove Park Road, for the Kinnaird Park Estate, Ltd.

The Herts Education Committee is purchasing a site in Blindman's Lane, CHESHUNT, for the erection of an elementary school.

The Green Line Garages, Ltd., have acquired the building lease of land at the junction of Creek Road and Lamerton Street, DEPTFORD.

The L.M.S. is to erect shops at Kilburn railway station, Edgware Road, EDGWARE.

Mr. J. Neilson is erecting a factory in Great Cambridge Road, ENFIELD.

The Middlesex Education Committee is purchasing a site in Carterhatch Lane, ENFIELD, for the erection of a secondary school.

The FINCHLEY U.D.C. has prepared a scheme for the erection of eighty-seven houses and forty-two flats on various sites.

The FINCHLEY Education Committee is to erect an elementary school on a site in Summers Lane.

Plans passed by the FINCHLEY U.D.C.: Thirty-nine garages, Walfield Avenue, for Mr. P. D. Walker; two houses, Hill Top, for Mr. G. Ramsbottom; two houses, Gurney Drive, for Mr. A. Reast; tennis pavilion, Creighton Avenue, for Mr. E. N. Cansick.

Plans passed by HAMMERSMITH B.C.: Additions, 1 St. Peter's Square, for Messrs. W. Curtis Green and Partners; four blocks of flats, Cathnor Road, for Mr. F. Witt; three shops, Goldhawk Road, for Mr. D. Lewis.

Messrs. T. F. Nash, Ltd., are to develop the Tithe Farm estate, HARROW.

The Middlesex Education Committee has purchased a site on the Pinner Wood estate, HATCH END, for the erection of an elementary school.

The Middlesex Education Committee is to acquire a site on the Grange Park estate, HAYES, for the erection of an elementary school.

Plans passed by the HORNSEY Corporation: Additions, Smithfield Works, Cross Lane, for Mr. W. H. Partridge; workshop, 30 Oxford Road, for Mr. H. E. Askey; alterations and additions, 106–8 High Street, for Mr. M. K. Matthews; studio, 67 Muswell Hill Place, for Messrs. G. Knight & Co.; alterations, 59 High Road, Wood Green, for Messrs. Hamblin Fox and Bailey.

The Middlesex Education Committee has purchased a site in Bushey Road, ICKENHAM, for the erection of an elementary school.

Messrs. Edmond Coignet, Ltd., are to erect a building at the corner of High Street and Myron Place, LEWISHAM.

Mr. Bernard Geen is to erect premises in Martell Road, NORWOOD.

The L.C.C. is to erect a school for 400 pupils in Leigham Court Road, STREATHAM HILL.

Mr. S. Boothman has purchased a building site from the L.C.C. at the junction of Leigham Court Road and Mountearl Road, STREATHAM.

Messrs. Kennards (Wimbledon), Ltd., are to erect premises in Victoria Crescent, WIMBLEDON.

SOUTHERN COUNTIES

Plans passed by the EASTBOURNE Corporation: Four houses, Longlands Road, for Mr. W. R. Hamblyn; two houses, Decoy Drive, for Mr. F. C. Benz; additions, bakery, Lottbridge Road, and house, King's Drive, for Mr. A. Ford; house, Watts Lane, for Mr. H. Hubbard Ford; forty-eight houses, Kingston Road, for Messrs. P. D. Stonham and Son; three houses, Dacre Road, for Mr. A. J. Fellows.

Messrs. Bobby & Co. are to erect premises on land in Pevensey Road, EASTBOURNE.

The EASTBOURNE Corporation is making an offer for the acquisition of property in Market Square, Hailsham, for purposes of electricity showrooms.

Plans passed by the HERNE BAY U.D.C.: House, Central Avenue, for Mr. F. J. Line; bungalows, Fleetwood Avenue, for Messrs. Goodwin and Russell, Ltd.: house, Fernlea Avenue, for Mr. H. Pettman; bungalow, Sandown Drive, for Mr. A. J. Godfrey; house, Albany Drive, for Mr. R. Messenger; six houses, Southsea Drive, for Mr. C. J. Jordan.

Plans passed by the PORTSMOUTH Corporation: Twenty-one houses, Butts Road, for Messrs. McCormick and Son; thirty houses, Hawthorn Cross, Cosham, for Messrs. G. and W. Mitchell; twelve houses, Kenyon Road, for Mr. J. McDermott; twenty houses, Kirby Road, for Messrs. McCarthy Bros.; additions, 56 Chelsea Road, for Messrs. Jordans, Ltd.; three bungalows, Stanley Avenue, Copnor, for Mr. C. V. Thorpe; warehouse, 54–56 Oyster Street, for Messrs. Crouchers, Ltd; eight houses, Stride Avenue, for Mr. E. Kidd; twenty houses, Elmwood Road, Hilsea, for Mr. R. J. Winnicott; eighteen houses, Stanley Avenue, Copnor, for Mr. V. Dye; twelve houses, off Tangier Road, for Messrs. Westbrooke & Co.

SOUTH-WESTERN COUNTIES

The DORCHESTER Corporation is to have plans prepared for the erection of twenty houses on the Victoria estate.

Plans passed by the DORCHESTER Corporation: Shop, Great Western Road, for Weymouth and District Co-operative Society; additions, bottling stores, Dorchester Brewery, for Messrs. Eldridge Pope & Co.; two houses, Edward Road, for Mr. R. S. Joffs; bungalow, East Parade, for Mr. A. J. Parry; house, Monmouth Road, for Mr. W. I. Taylor.

MIDLAND COUNTIES

The LEICESTER Corporation is to provide orthopædic accommodation at the City General Hospital, at a cost of £9,840, from plans prepared by Mr. A. F. Duke, of Messrs. Giles, Gough and Trollope.

The SMETHWICK Corporation has decided to purchase thirty-five acres of land at Perry Hill, for a housing scheme.

The SMETHWICK Corporation is to purchase property in Windmill Lane, for the provision of a branch library and clinic.

The STOKE-ON-TRENT Education Committee has selected a site on the Meir housing estate for the erection of an elementary school.

NORTHERN COUNTIES

The BRADFORD Corporation has approved the plans of the city architect for the erection of four shops and houses on the Chellow Grange estate.

The Ribble Motor Services, Ltd., is to provide a central bus station at CARLISLE.

The HULL Education Committee has now arranged to erect, by direct labour, new junior and senior departments at Hall Road school, at a cost of £47,034.

The MANCHESTER Corporation is to acquire land in Stokes Street for the erection of sixty-two houses.

The MANCHESTER Education Committee has approved plans for extensions at Didsbury boys' central school.

Plans passed by the PENRITH U.D.C.: Fourteen houses, Victoria Road, for Messrs. Hitchen and Atkinson; workshop, Brunswick Road, for Mr. J. Thompson.

The SHEFFIELD Corporation has leased land on the Manor estate to the Brightside and Carbrook Co-operative Society, for the erection of shop premises.

The SHEFFIELD Education Committee has acquired a site at Sycamore House Road, for the erection of an elementary school.

Plans passed by the SHEFFIELD Corporation: House, Prince of Wales Road, for Mr. L. Osborne; house, Glebe Road, for Mr. F. Lamb; four houses, Bents Road, for Mr. J. A. Wragg; house, Abbey Crescent, for Mr. J. V. Auckland; two houses, Cartmel Road, for Mr. J. Enock; house, Marshal Road, for Mr. C. W. T. Scott; four bungalows, Hutchille Wood Road, for Mr. W. Bingham; two houses, Halesworth Road, for Mr. D. Hurrell; 484 houses, Shiregreen estate, for Corporation Estates Committee; two houses, Marlcliffe Road, for Mr. B. F. Glossop.

The TYNEMOUTH Corporation has sold building sites on the Balkwell estate to Messrs. Woodall and Shepherd.

Plans passed by the TYNEMOUTH Corporation: Two houses, Broadway, for Mr. J. R. Wallace; two houses, Billy Mill Lane, for Mr. W. Stockdale; school, Travor Terrace, for the Education Committee.

The TYNEMOUTH borough engineer has prepared a rehousing scheme providing for the erection of 299 houses.

The TYNEMOUTH Corporation is to interview the Ministry of Health regarding a proposed clearance scheme for the Liddell Street area.

WALES

The SWANSEA Corporation has leased lands in Townhill Road, to Mr. A. E. Wright, for the erection of nine houses.

Plans passed by the SWANSEA Corporation: Two houses, Clydach Road, for Messrs. Powell and Hopkins; two houses, Penmaen Terrace, for Mr. A. J. Marks; two houses, Llangyfelach Road, for Mr. D. A. Rosser; alterations, 4 Union Street, for Messrs. Thomas, Son and Harris; three bungalows, Dunvant Road, for Mr. W. L. Simons; eight houses, Hadland Terrace, for Mr. Geo. Symons; four houses, Lon Coed Road, for Messrs. Rogers and Davies; five houses, Lon Cldwym, for Mr. A. Wright.

SCOTLAND

The following figures show the progress that has been made in State-aided housing schemes in Scotland to September 30, 1931: 1919 Act, completed 25,129; 1919 Act (by public utility societies), completed 421; private subsidy schemes (1919 Additional Powers Act), completed 2,324; slum clearance schemes, completed 13,881, under construction 1,352; 1923 Act by local authorities, completed 4,033; 1923 Act by private enterprise, completed 20,260, under construction 2,069; 1923 Act by public utility societies, completed 80; 1924 Act by local authorities, completed 52,544, under construction 6,262; 1924 Act by private enterprise, completed 3,095, under construction 641; 1924 Act by public utility societies, completed 127, under construction 16; 1930 Act by local authorities, completed 64, under construction 2,931; unallocated houses, under construction 44; demonstration houses, completed 17; steel houses erected on behalf of Government by Scottish National Housing Company, completed 2,552; total completed, 124,527; total under construction 13,315; total 137,842.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A,	ABERDARE	S. Wales & M.	1 6	1 1½
A,	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A,	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
A	Aldeburgh ..	E. Counties	1 2½	11
C	Altrincham	N.W. Counties	1 6½	1 2
B	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A,	Atherstone	Mid. Counties	1 5	1 0½
B,	Aylesbury ..	S. Counties	1 3	11½
B,	BANBURY	S. Counties	1 4	1 0
B,	Bangor ..	N.W. Counties	1 4	1* 0
A,	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B,	Basingstoke	S.W. Counties	1 4	1 0
A,	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A,	Bedford ..	E. Counties	1 5	1 0½
A,	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A,	Bewdley ..	Mid. Counties	1 5½	1 1½
B,	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A,	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B,	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A,	Boston ..	Mid. Counties	1 5	1 0½
A,	Bournemouth	S. Counties	1 5	1 0½
B,	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A,	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B,	Bridgwater	S.W. Counties	1 3½	11½
A,	Bridlington	Yorkshire	1 6	1 1½
*	Brighouse ..	Yorkshire	1 6½	1 2
A,	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B,	Brixham ..	S.W. Counties	1 3	11½
A,	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A,	Buxton ..	N.W. Counties	1 6	1 1½
A,	CAMBRIDGE	E. Counties	1 6	1 1½
B,	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B,	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A,	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B,	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B,	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A,	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A,	Colwyn Bay	N.W. Counties	1 5	1 0½
A,	Consett ..	N.E. Coast	1 6	1 1½
A,	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A,	Crewe ..	N.W. Counties	1 5½	1 1½
A,	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B,	Deal ..	S. Counties	1 3½	11½
A,	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B,	Dorchester	S.W. Counties	1 3½	11½
A,	Driffield ..	Yorkshire	1 5	1 0½
A,	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A,	EASTBOURNE	S. Counties	1 5	1 0½
A,	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A,	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A,	Exeter ..	S.W. Counties	*1 5½	1 1½
B,	Exmouth ..	S.W. Counties	1 4	1 0
A,	FELIXSTOWE	E. Counties	1 5	1 0½
A,	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B,	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B,	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B,	Gillingham	S. Counties	1 4	1 0
A,	Gloucester ..	S.W. Counties	1 5½	1 1½
A,	Goole ..	Yorkshire	1 5½	1 1½
A,	Gosport ..	S. Counties	1 5	1 0½
A,	Grantham ..	Mid. Counties	1 5	1 0½
A,	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B,	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B,	Hastings ..	S. Counties	1 3½	11½
A,	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A,	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A,	Ipswich ..	E. Counties	1 5	1 0½
B,	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A,	Kettering ..	Mid. Counties	1 5½	1 1½
A,	Kidderminster	Mid. Counties	1 5½	1 1½
B,	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A,	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B,	Lewes ..	S. Counties	1 3	11½
A,	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A,	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A,	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A,	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A,	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B,	Margate ..	S. Counties	1 4	1 0
A,	Matlock ..	Mid. Counties	1 5	1 0½
A,	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A,	Middlewich	N.W. Counties	1 5½	1 1½
B,	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A,	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A,	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A,	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A,	OAKHAM ..	Mid. Counties	1 5	1 0½
A,	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A,	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B,	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A,	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A,	Pontypridd	S. Wales & M.	1 6	1 1½
A,	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A,	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A,	Retford ..	Mid. Counties	1 5	1 0½
A,	Rhondda Valley	S. Wales & M.	1 6	1 1½
A,	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B,	Rochester ..	S. Counties	1 4	1 0
A,	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A,	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A,	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B,	Salisbury ..	S.W. Counties	1 3	11½
A,	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A,	Shrewsbury	Mid. Counties	1 5½	1 1½
A,	Skipton ..	Yorkshire	1 5½	1 1½
A,	Slough ..	S. Counties	1 5	1 0½
A,	Solihull ..	Mid. Counties	1 5½	1 1½
A,	South'pton	S. Counties	1 5	1 0½
A,	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A,	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A,	Swindon ..	S.W. Counties	1 5	1 0½
A,	TAMWORTH	N.W. Counties	1 6	1 1½
B,	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A,	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A,	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A,	Warwick ..	Mid. Counties	1 5½	1 1½
A,	Wellingborough	Mid. Counties	1 5½	1 1½
A,	West Bromwich	Mid. Counties	1 6½	1 2
A,	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A,	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B,	Winchester	S. Counties	1 4	1 0
A,	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A,	Worcester	Mid. Counties	1 5½	1 1½
A,	Worksop ..	Yorkshire	1 5	1 0½
A,	Wrexham ..	N.W. Counties	1 6	1 1½
A,	Wycombe ..	S. Counties	1 5	1 0½
B,	YARMOUTH	E. Counties	1 4	1 0
B,	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 3
¾" Crushed Ballast . . . . . ,,	9 6
Building Sand . . . . . ,,	10 0
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . . ,,	6 3	7 2
Rest bends . . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d d F.O.R at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . . as 1" F.S.	9
Deal, Joiner's . . . . ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured ,, . . . ,, ,,	1 1
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . . ,, ,,	1 1

Deal floorings,	Sq.
⅞"	1 1 0
1"	1 3 6
1¼"	1 5 6
1½"	1 11 0
2"	1 15 0
Deal matchings, ⅞"	16 0
1"	17 6
Rough boarding, ⅞"	1 6 0
1"	18 0
1½"	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness .	⅛"	¼"	⅜"	½"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas	50
Water . . .	58½	,, water	45
Steam . . .	55	,, steam	40

FITTINGS.

Gas . . .	57½	Galvanized gas	47½
Water . . .	52½	,, water	42½
Steam . . .	47½	,, steam	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 6
,, ,, ⅞" . . ,,	9 6
,, ,, 1" . . ,,	9 6
,, ,, 1¼" . . ,,	9 6
,, ,, 1½" . . ,,	9 6

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	3" s. d. 7	4" s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 9
Swan-necks up to 9" offsets. ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal . F.R.	5
Stop ends . . . . each	6
Angles . . . . ,,	1 7
Obtuse angles . . . ,,	2 0
Outlets . . . . ,,	1 9

	6"
	7
	3 3
	8 6
	6 0
	9
	5 0
	6 3
	5 6
	6
	7
	1 7
	2 0
	2 6

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.
Sheet glass, 21 oz. . . F.S.	3½
,, ,, 26 oz. . . ,,	4½
Arctic glass . . . . ,,	5
Cathedral glass . . . ,,	6
Hartley's rough rolled . ,,	9
Do. wired plate . . . ,,	1 3
¼" Polished plate, n/e 1 ft. . ,,	7½ to 1 0
,, ,, 2 . . ,,	10 ,, 1 3½
,, ,, 3 . . ,,	1 4½ ,, 1 10
,, ,, 4 . . ,,	1 4½ ,, 1 10
,, ,, 6 . . ,,	1 11 ,, 2 4
,, ,, 8 . . ,,	2 5 ,, 3 9½
,, ,, 12 . . ,,	2 10 ,, 3 3½
,, ,, 20 . . ,,	3 3½ ,, 3 9
,, ,, 45 . . ,,	3 6½ ,, 4 0½
,, ,, 65 . . ,,	3 11½ ,, 4 4
,, ,, 90 . . ,,	4 4 ,, 4 9
,, ,, 100 . . ,,	4 6 ,, 4 11
Vita glass, sheet, n/e 1 . ,,	1 6
,, ,, ,, 2 . ,,	1 3
,, ,, ,, over 2 . ,,	1 9
,, ,, plate, n/e 1 ft. ,,	1 6
,, ,, ,, 2 . ,,	3 0
,, ,, ,, 5 . ,,	4 0
,, ,, ,, 7 . ,,	5 6
,, ,, ,, 15 . ,,	6 0
,, ,, ,, over 15 . ,,	7 6
Putty, linseed oil . . . lb.	3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	2 4
Boiled oil . . . . ,,	2 8
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, ,, junctions	,,	3 9	4 6
Gullies and gratings		17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving on flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
¼″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1¼″ ,, ,, ,, ,,	,,	2 7 6
1½″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1¼″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
¼″ do.	,,	3 4 0
½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ½″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	,,	2 0 6
Do. in covering to turrets, etc.	,,	2 7 6
Do. in soakers	,,	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1¼″ s. d. 2 8	2″ s. d. 3 8	4″ s. d. —
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

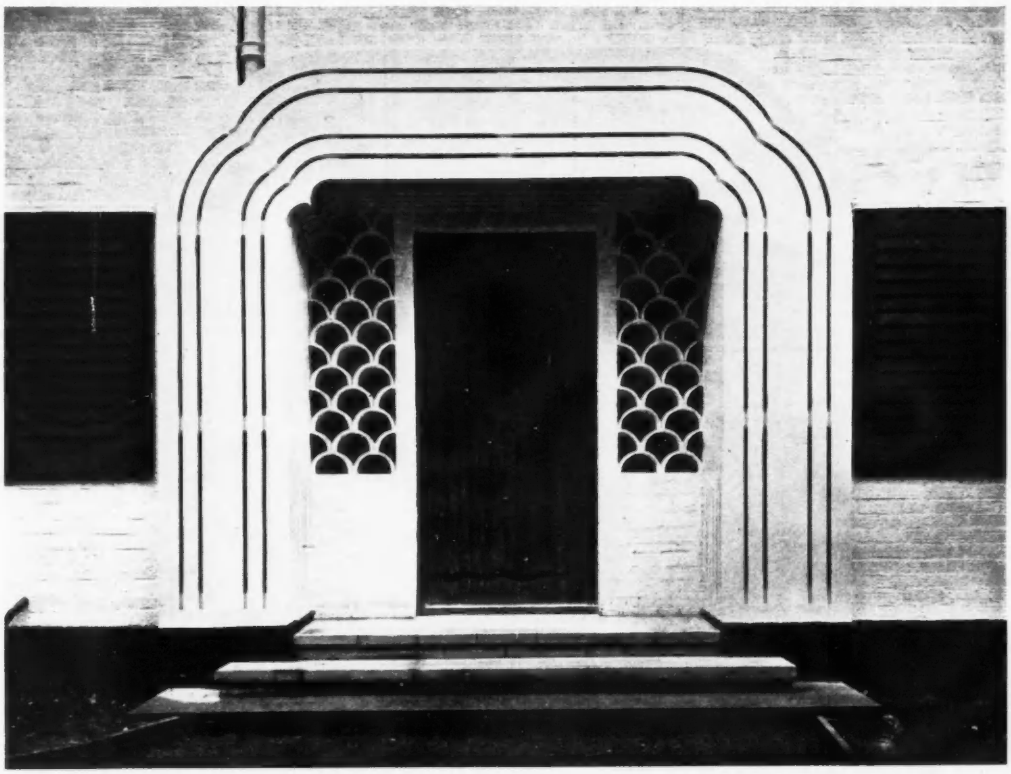
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper from	,,	2 9

RECESSED PORCH AND WINDOWS

DETAILS FROM A HOUSE AT FINCHLEY: BY WELCH, CACHEMAILLE-DAY AND LANDER



THE ENTRANCE, SHOWING FRONT DOOR AND HONEYCOMB WINDOWS

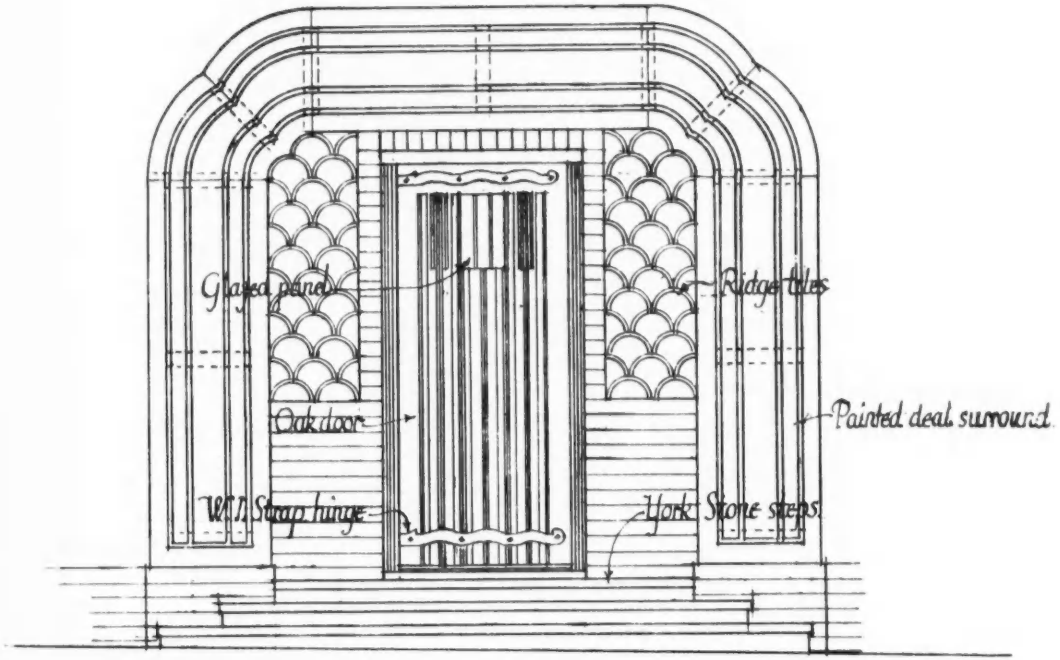
ELSEWHERE in this issue photographs and a description appear of the house at Finchley from which details of the porch have been selected for illustration here—above, photographically, and in drawings, overleaf.

The main constructional materials are brick and ridge tiles, both of which are whitewashed. The ridge tiles are arranged in a honeycomb pattern on either side of the front door, and the windows thus formed have opening glass casements on the inside. The surround of the recess is in painted deal trellis, behind the slats of which, on the left-hand side, is concealed the window of a lavatory that opens off the hall.

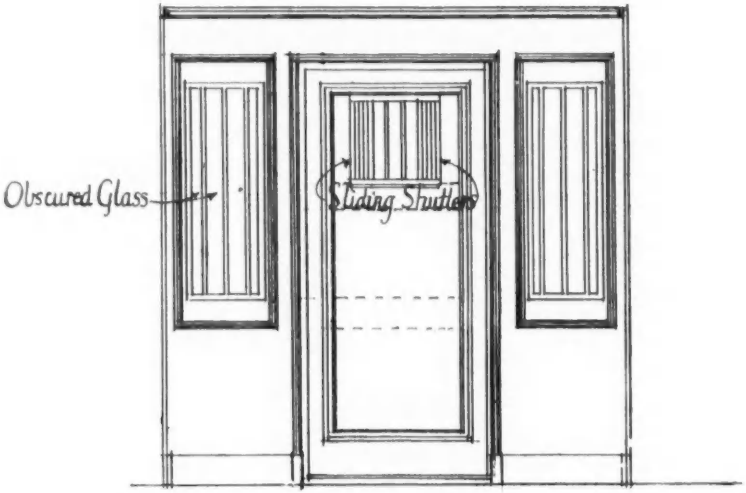
The entrance door is carried out in limed oak, with wrought iron hinges, bell pull, etc. Its back is covered with a plywood panel, faced with Oregon pine, stained to match the interior joinery of the house.

HOUSE AT FINCHLEY

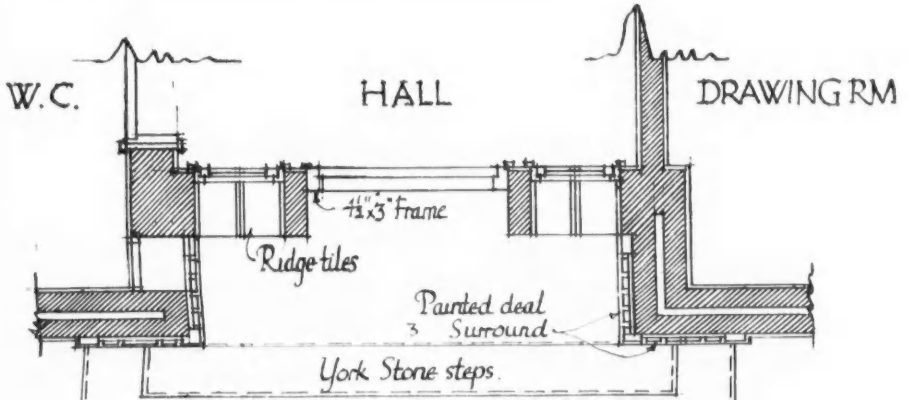
DETAILS OF ENTRANCE DOOR AND SURROUND.

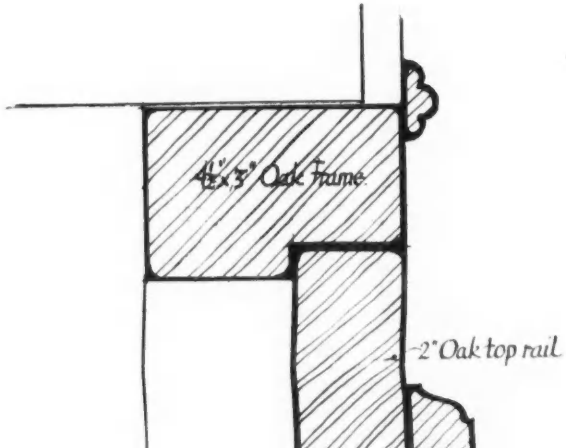


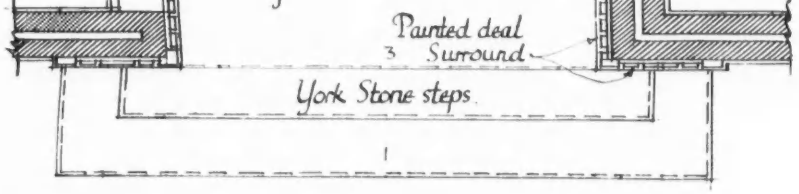
EXTERNAL ELEVATION.



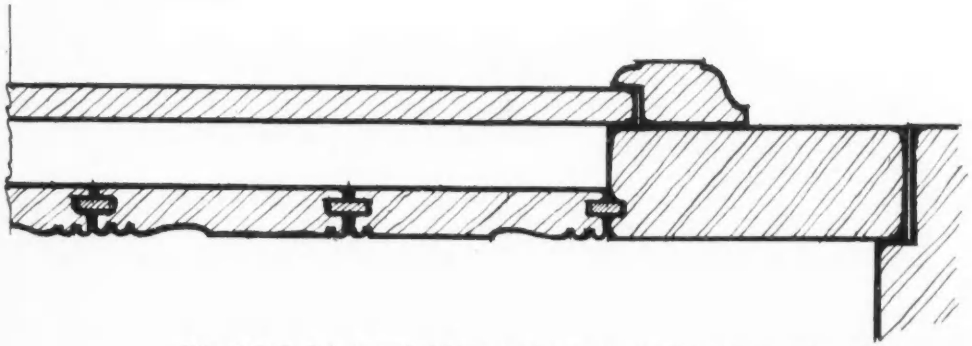
INTERNAL ELEVATION.



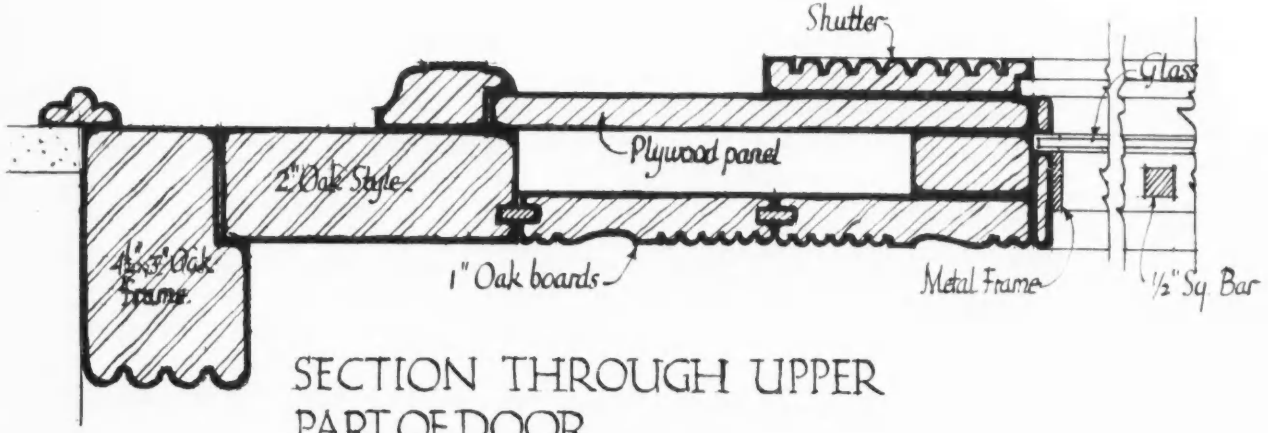


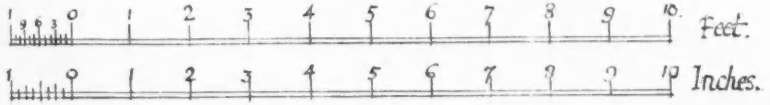


PLAN

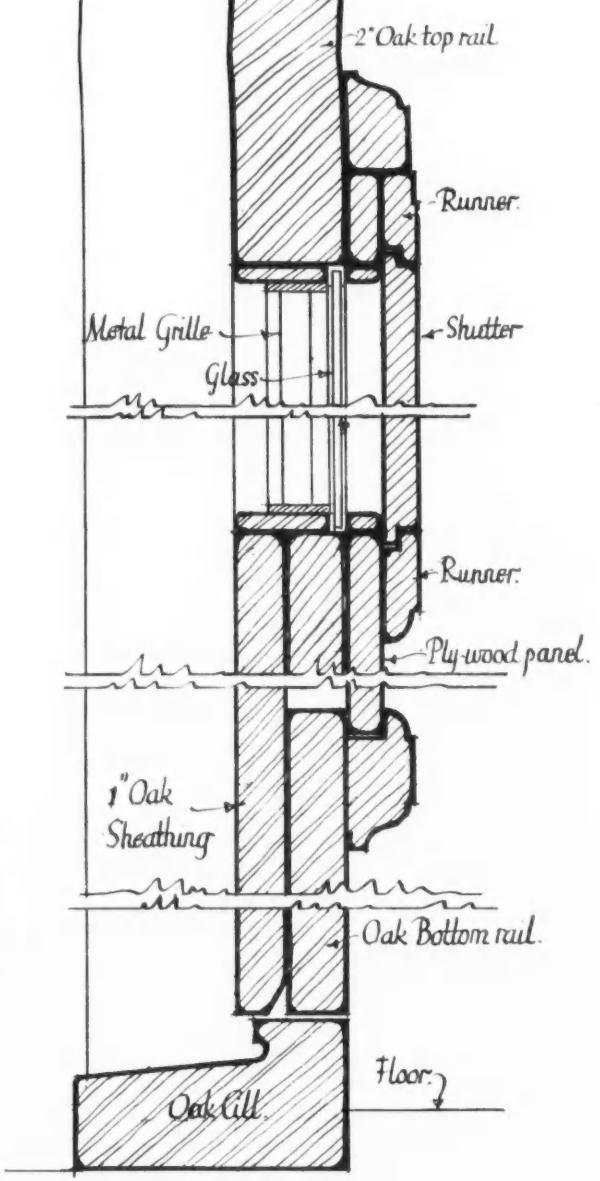


SECTION THROUGH LOWER PART



SECTION THROUGH UPPER PART OF DOOR

Scales.

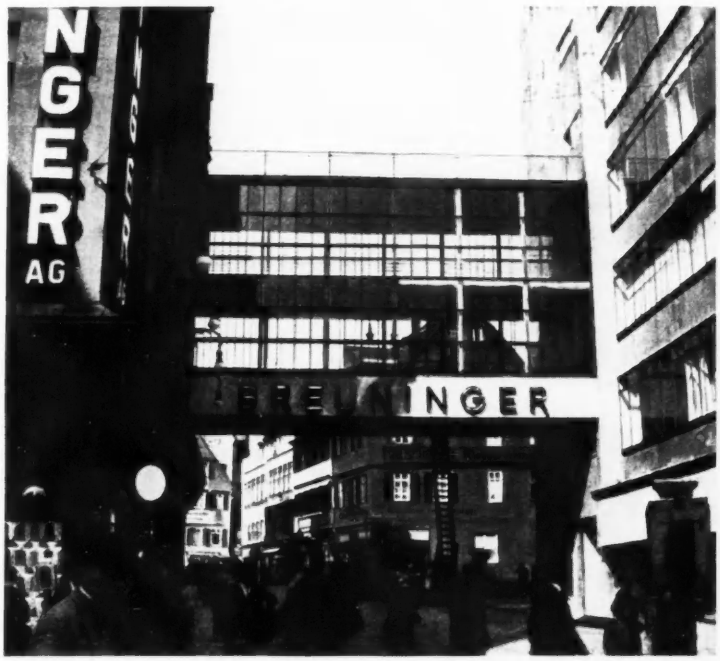
Welch, Cachemaille-Day and Lander, Architects.



VERTICAL SECTION THROUGH DOOR

TWO-STORY BRIDGE

AT THE BREUNINGER STORE, STUTTGART, GERMANY



[Eisenlohr and Pfennig, Architects

THE BRIDGE, AS SEEN BY THE CAMERA FROM THE STREET

THIS two-story bridge links the existing Breuninger Store with the new wing, the staircase of which was the subject of a supplement in the July 15 issue.

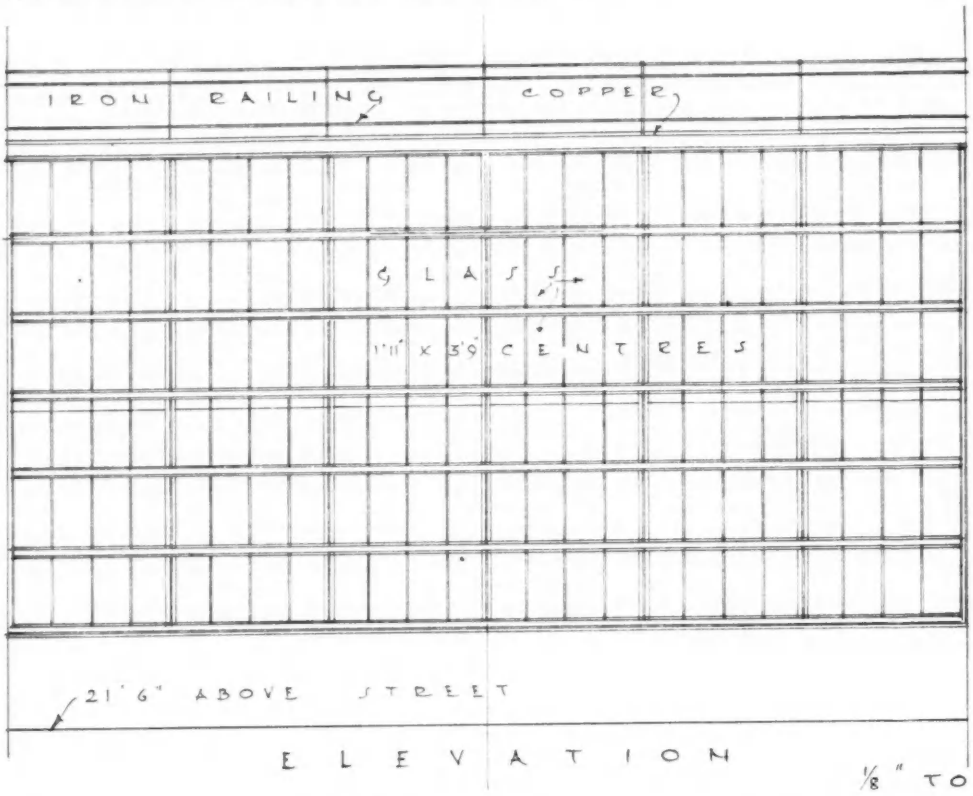
Two beams, spaced 17 ft., centre to centre, span the 46 ft. road, and carry five stanchions spaced equally, which in turn support the upper floor and the roof.

Between the glazing and the upper floor is a 10½-in. space, which enables the window to continue unbroken through the full height of the bridge.

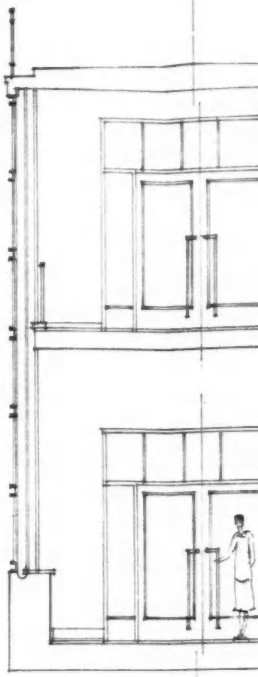
The rigidity of the windows is dependent on the seven horizontal channels, which are held to each stanchion by bolted brackets, and secured at their ends to vertical channels fixed to the walls. The vertical glazing bars serve only to subdivide the glass.

The joinery and floors are of jarrah, stained to a deeper shade of its natural colour. The iron balustrade to the upper floor is painted a bright shade of green.

Metal-covered doors give access at one end to the existing building, whilst the other opens direct on to the staircase of the new block.

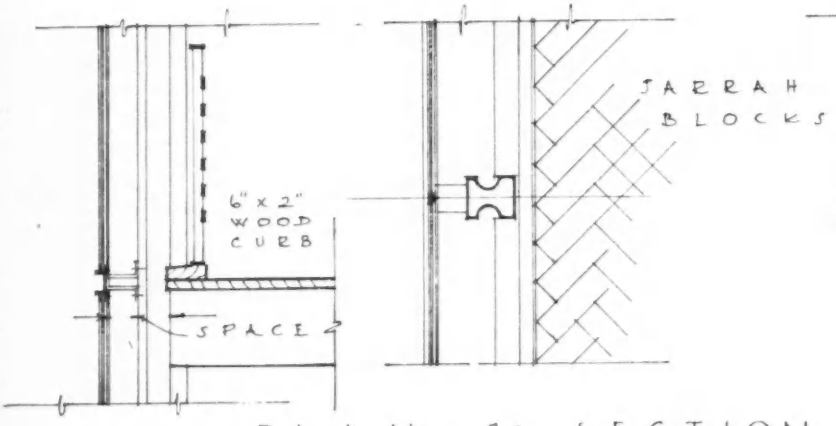


ELEVATION

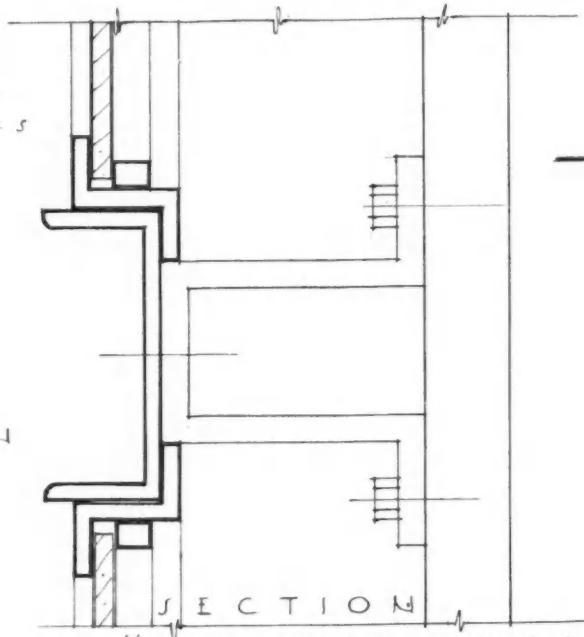


SECTI

1/8" TO 1 FOOT

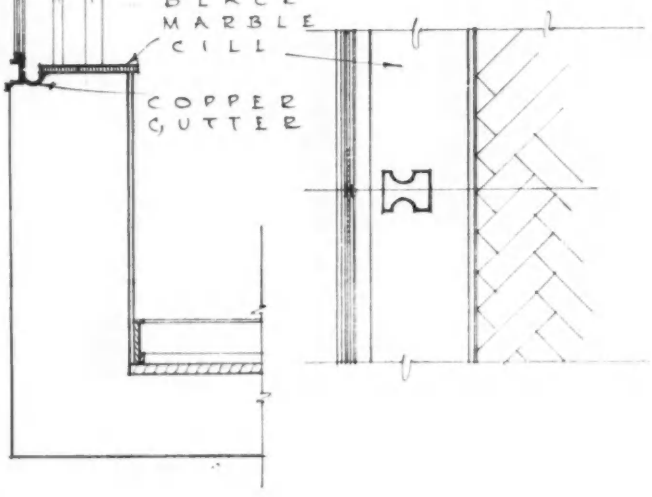


PLAN & SECTION
UPPER FLOOR

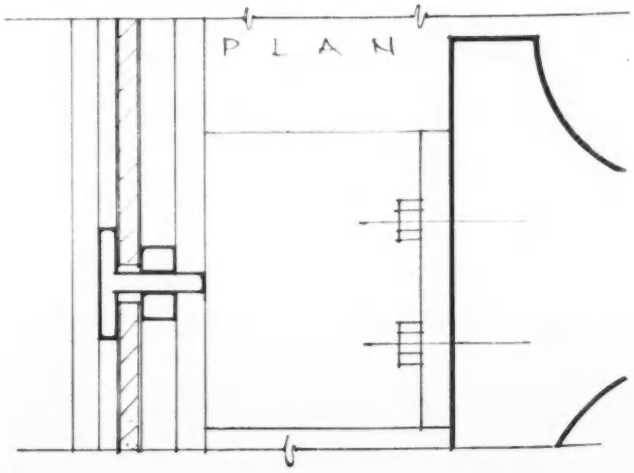


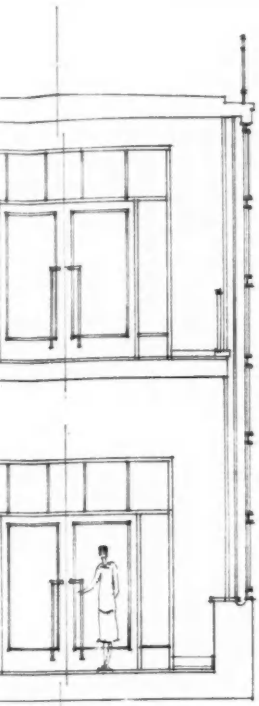
SECTION
½ F.S. THRO WINDOW

P

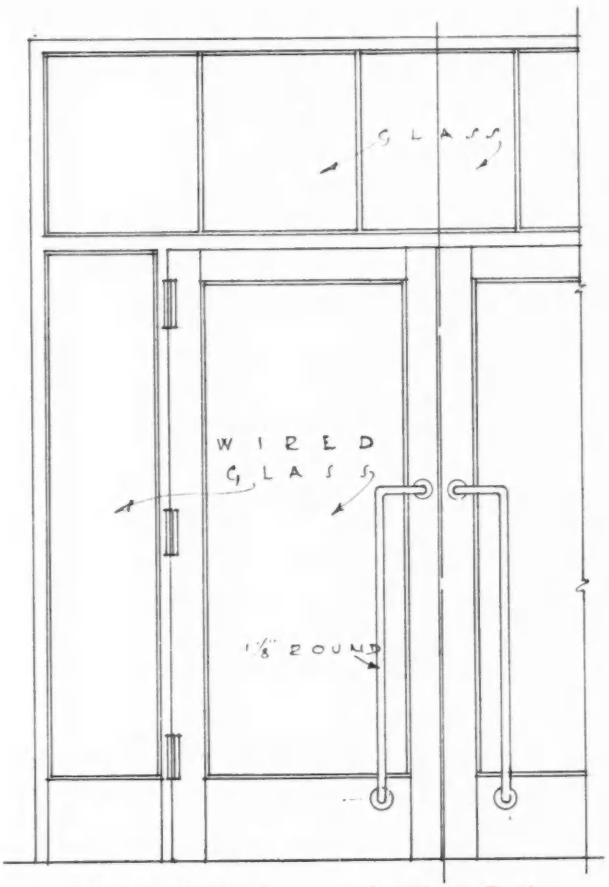


PLAN & SECTION
LOWER FLOOR
½" TO 1 FOOT

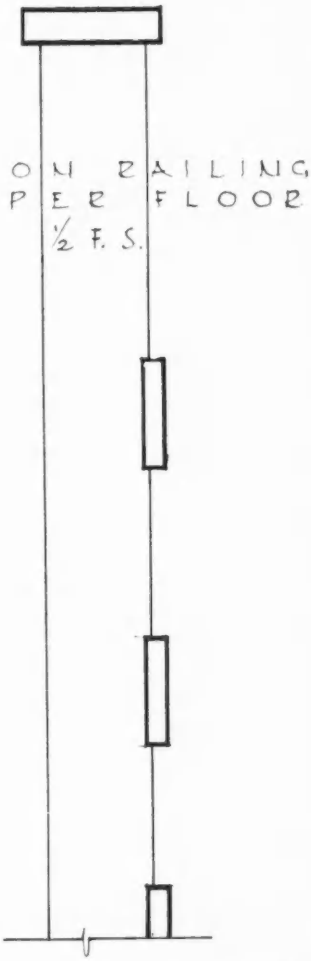


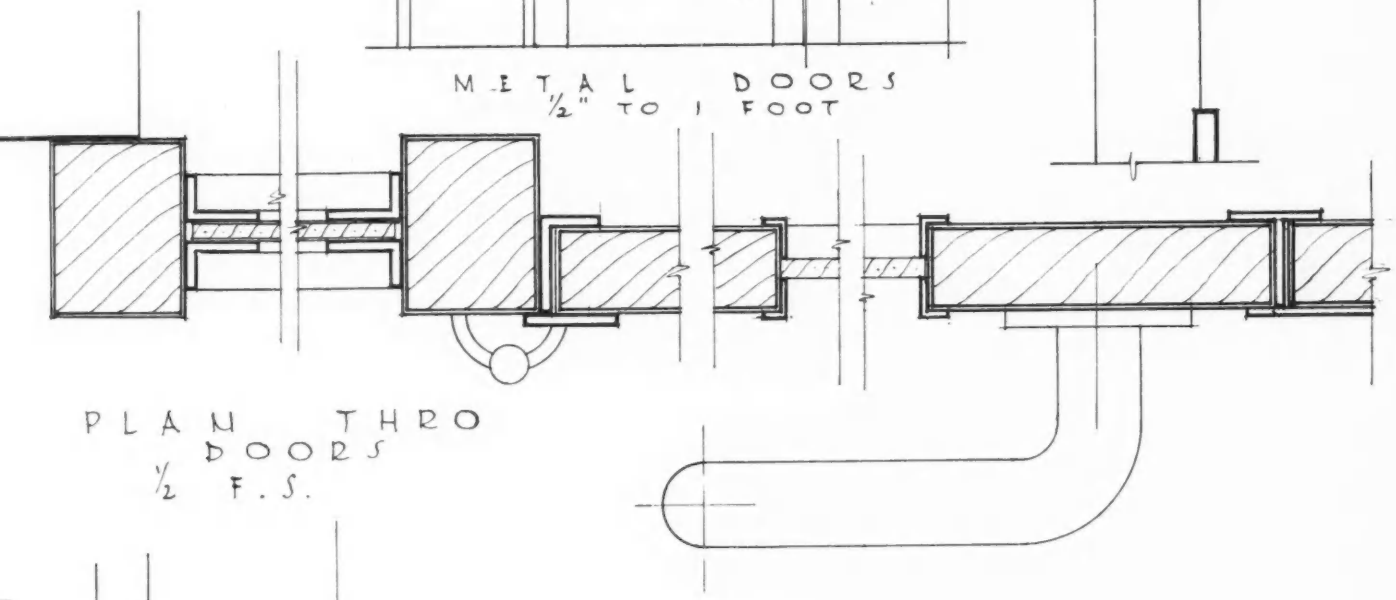


CTION

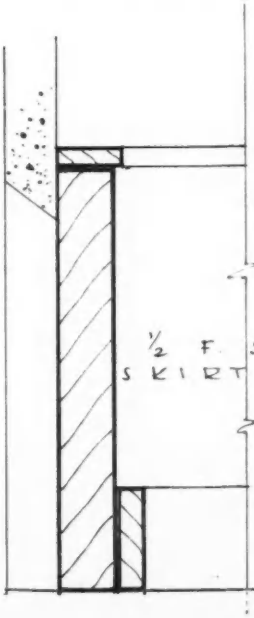


METAL DOORS
½" TO 1 FOOT





PLAN THRO DOORS
½ F.S.



THE BRIDGE.
BREUNINGER STORE.
STUTTGART.

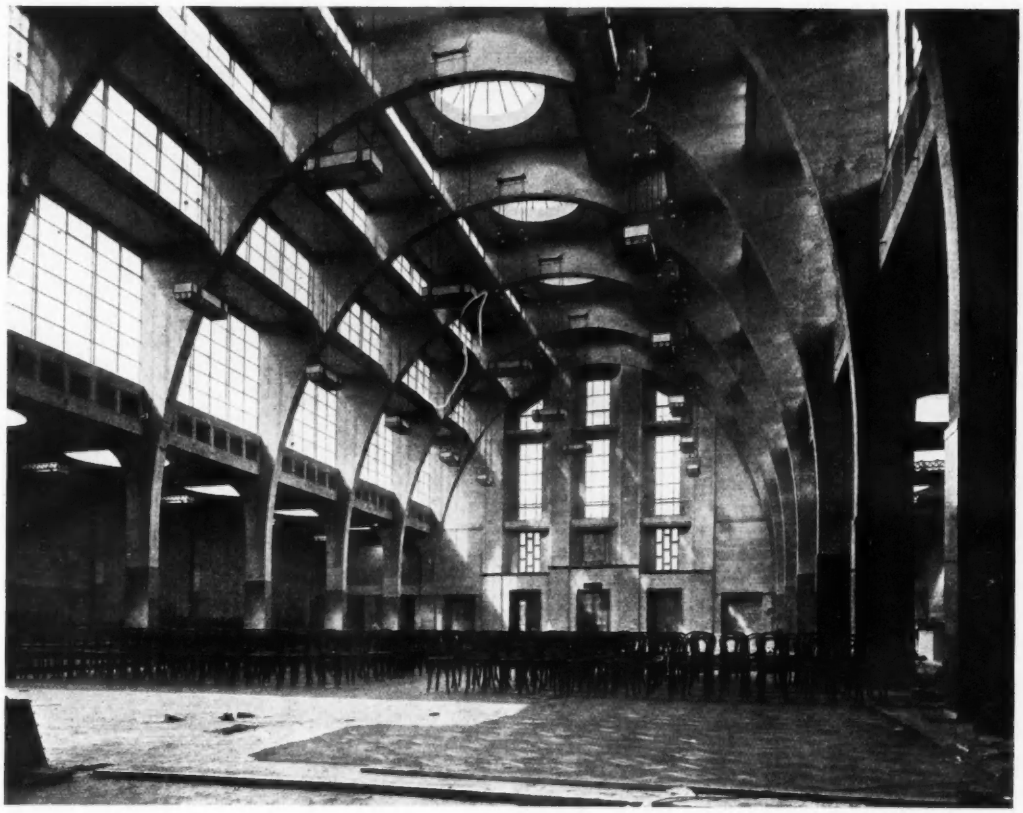
ARCHITECTS,
EISENLOHR & PFENNIG.

HALF FULL SIZE &
HALF INCH DETAILS.

MEASURED & DRAWN BY F.R.S. YORKE. A.R.I.B.A. 1931

SELECTED PRECEDENTS:

ARCHED CONCRETE ROOFS



[Easton and Robertson, Architects.

1. THE HORTICULTURAL HALL, WESTMINSTER (1928)

CONCRETE has done far more than steel to liberate us from the choice of domed or flat roofs for large structures, though, paradoxically enough, most architects who employ that material make it an excuse for imposing the latter on domestic buildings. Thanks to concrete, types of ellipsoidal arches never before possible now present no particular difficulties, and the widest spans and loftiest vaults are relatively simple and cheap to construct. Roofing and walling have ceased to necessitate the use of different materials. Designs in which the side walls curve over to form the roof have proved particularly suitable for buildings like covered markets, exhibition halls, swimming-baths, large railway-stations, big machine shops, and certain types of factory.

The famous twin airship sheds at Orly, near Paris, constructed by Freyssinet in 1916, with a single centering, moved forward from rib to rib, were the prototypes of the parabolic arched hall. A modified form of the same method, which obviates the need for infillings because each arch is conterminous with its neighbour, was employed in the new market-hall of Rheims.

Non-aeronautical application of this principle was made in the great hall of the Gothenburg Exhibition of 1923: a design strikingly similar to the new Horticultural Hall in Vincent Square, Westminster (figure 1); and the Heslach swimming-bath at Stuttgart. In all three the round-headed arches are spaced some distance apart, and clerestories for lighting the vault are notched into the exterior curves of their ribs.

The two parallel halls of the permanent exhibition buildings at Brünn (figure 2), which have arches much more oval, are lit by windows in the walls (from which the ribs break away), and continuous roof skylights.

Figure 3 is an example of the so-called "butterfly roof," in which one row of columns is superimposed on a gallery supported by another. It is one of the few American examples of original design in concrete: these trusses are not ramifications of the main stanchions, but spring from beams supported by them at wide intervals. The central nave, like the nearer of the two side aisles on either side of it, is lit by oblique-angled clerestories.

BAIRD DENNISON

2. *THE PERMANENT EXHIBITION BUILDINGS, BRÜNN, CZECHO-SLOVAKIA (1928)*

[*Albert A. Kahn, Architect.*

3. *AN EXPERIMENTAL BUILDING OF THE FORD LABORATORY, DETROIT*

THE ARCHITECTS' JOURNAL

WEDNESDAY, NOVEMBER 18, 1931

THE NEWEST SPECIMEN

ONCE again, the R.I.B.A. is inviting nominations for the London Architecture Medal. Members everywhere are being asked to suggest a building for consideration by the jury. This building should be within a radius of eight miles from Charing Cross, and should have been finished between January 1, 1929, and December 31, 1931. The forms are to be sent to Mr. MacAlister by February 29 next. We hope all readers of the JOURNAL who have had forms will, when they buy their office diaries for 1932, at once make an entry reminding them to fill in this form. Four months is very long notice : time enough, indeed, to forget concerns even more immediate than the R.I.B.A. medal. There must have been a very weighty reason for circulating the forms so long in advance; whatever the reason, we hope as many people as possible will make it their business to vote. One or more reminders will appear in these pages in due course.

The inauguration of the medal came at an opportune moment. There were quite unmistakable signs of a growing interest—not before it was due—on the part of Londoners in their city. Editorial comments and letters in the daily Press, criticism in the weeklies, and the increase in the number of books dealing with London and with architecture generally, addressed to the general public, all testified to this welcome fact. London is so vast that a civic consciousness and pride such as are to be found in certain provincial towns, notably in Birmingham, with its Civic Society and its gold medal, are quite impossible. It was therefore all the more desirable that there should be some recognition of good work where conditions render public opinion so inarticulate.

How far is the existence of the medal known to the public at large ? We should like to see the Press give the award even greater publicity than it receives at present. For after all, this is something that they can understand; it is a straightforward issue. This is the street frontage in London which the architectural profession considers to be the best that has been erected in the course of the given period. There is nothing ambiguous about that. The award has a message, for what it implies is this : " We, the architectural profession, are of the opinion that the appearance of the streets in London would benefit if more frontages of this kind were built; do not, therefore, demand of us that we should design buildings which acknowledge other and less worthy standards than this one." Later, it might not be too much to hope that the building owners themselves should take a vicarious pride in the medal; that the honour should be shared between the architect and his clients.

With a view to increasing public interest in the event we think the decision that a building which has received the award shall carry some mark of distinction an excellent one. Think, too, what interest it will have added to the streets of London in the course of fifty years, what a chronicle of the changing tastes of half a century. Should not we ourselves like to know what was deemed the best design in, let us say, the famous year 1851 ? Our comments might be harsh; so, too, may be those of our successors.

But in the artistic chaos among which we live it is necessary that here and there at least a few signposts should be set up. What manner of building was thought good and desirable in 1931 ? The fashion-papers of 1931 will show our descendants exactly what sort of examples were generally followed in the matter of clothing for men and women. The political papers will accurately reflect our attitude towards government at home and abroad. In our architectural journals no similar evidence will be available. For the year 1931 there will appear a jumble of buildings, belonging to every conceivable fashion that has ruled during the last two or three decades, and it would be a hazardous job to try and form a balanced historical view from such a farrago as this. The dated medal building will be a surer sign. Here our future historian may really see what the bulk of architects were thinking. Here he may find a genuine specimen of the years' architectural growth.

A MODERN TEMPLE OF PLEASURE IN BERLIN

The Lichtburg cinema theatre, Berlin, of which the main entrance is shown in the above view, is one of the German examples chosen by Paul Zucker and G. Otto Stindt for illustration in their book on cinema houses, reviewed in this issue.

The work of Rudolf Fränkel, it is, the authors state, typical of modern tendencies in its planning: the cinema itself is blended with the surrounding premises, which are designed for rental purposes. This diversity of aims is made immediately comprehensible to the eye by the contrast between vertical and horizontal components.

Internally, the problem of reconciling, in the one auditorium, the by no means identical characteristics demanded by a variety theatre and a talkie-cinema, has been solved with the help of carefully-calculated wall spaces, special panelling and floor coverings, and much else besides—notably the form of the ceiling, which consists of a number of concentric rectangular lighting troughs of a particular profile adapted not only for optical purposes but for breaking up the sound and preventing echoes. The house has seating for 2,000 persons.

The doors lead into a circular vestibule at ground level; above, part of the same curve becomes the end of an oval salon for balcony patrons, set at an angle to the main axis of the auditorium.

By night the front presents a striking appearance. The sign is in neon lights; the whole of the deep vertical windows are illuminated from within; and searchlights play from the top gallery.

NEWS & TOPICS

THE ENGLISH HOUSE

THE appearance of Mr. Nathaniel Lloyd's *History of the English House*, published today by the Architectural Press, is an interesting sign of the times. Its 888 illustrations, running, together with the text, into close on 500 pages, give the author a chance to cover every possible aspect of the subject. And yet the book, priced at the astonishing figure of three guineas, is obviously intended to appeal to a very wide public indeed. That amateurs of architecture, here and abroad, will make a rush for the book may, I think, be taken for granted. Before the war no publisher would have thought it possible to plan a single volume of this scope at such a price. Folio monographs on single periods of architecture, issued in two or more parts and costing four or five times as much, were then demanded by the small expert public interested in genuine scholarship. But these are the days of outlines and omnibus books, and to Mr. Lloyd must be given the credit for making the riches of architecture equally interesting and accessible to the general reader.

CIVIC-MINDED BIRMINGHAM

The correspondence between the Secretary of the Birmingham Civic Society and the officials of the Corporation and other such generally unapproachable and unbendable persons, which is reproduced in the Annual Report, makes invigorating reading. So many societies with similar work to do are accounted well-wishing faddists that to find one that is listened to, and whose advice is quite often taken, sets one wondering exactly how it comes about that some towns are civic-minded and others are not. Such names as Cadbury and Chamberlain, among vice-presidents of this Society, suggest one line of surmise, but I believe myself that here you have an example where taste is steadied and controlled by architects actively working for the good of their city. Collaboration with city engineers and architects can only be possible where the lesser body is respected for its good sense and superior knowledge.

A CONFIDENCE TRICKSTER "WANTED"

The Editor has shown me a letter from a well-known member of the Institute, which arrived too late for inclusion in this issue, relating an account of a confidence trick practised upon him last week. This confidence trickster, Mr. T——, called upon, shall we say, Mr. F.R.I.B.A., armed with a site plan of a large estate. He stated that the purchase of the land had only been concluded the previous evening at the offices of Messrs. ——, solicitors. After the fees for the layout and houses had been arranged, Mr. T—— proposed to meet Mr. F.R.I.B.A. next morning in order to visit the estate. Just as he was going, Mr. T—— found he was short of cash; and the banks were, of course, closed. Would the architect "lend" him ten shillings? Needless to state Mr. T—— did not keep his appointment. In case he tries his wiles on any of the readers of this JOURNAL, I quote the following from our correspondent's letter:

This man calls himself Mr. H—— T——, of Messrs. H. and J. T——, Victoria Park, Manchester. He is about 5 ft. 4 ins. tall, forty years old, clean-shaven, with horn-rimmed glasses and a mop of brown hair brushed straight back from the forehead. He was wearing a blue suit, light overcoat and light trilby hat. Should he call on any reader, the police should be sent for, as there is a warrant out for his arrest at Bow Street.

THE UMBRELLA HOARDING

What can be the state of mind of the councillor of Chapel-en-le-Frith R.D.C. who urged, against the removal of certain advertisement hoardings in the Peak District, that another councillor described as "dreadful," and about which the C.P.R.E. had written a letter to the Council, the quaint plea that they were a shelter in bad weather? The rain it raineth every day, and remarkably straight, as a rule. And most hoardings I have seen have a negligible horizontal projection. The protection even of trees I have found to be largely illusory. It is an effect of suggestion. If it were to be taken seriously we might expect to see new terrors along the countryside—hoardings cut to the outlines of umbrellas and Burberrys. The oilskin and sou'wester pattern should be popular. Mercy, deliquescent heavens!

THE SEVEN SISTERS RAMP

Happily for lovers of Sussex coastwise amenities, the Seven Sisters cliff-lands were rescued not long ago by the National Trust from the threat of speculative building. Unhappily for the guileless motorists among them, they have now become the site of one of those mean little ramps with which a body so public-spirited as the Trust can hardly afford to have itself associated. The area is large, and I doubt if the car-folk, who for many years have left their cars here and there about it, while they took a walk over the sea-downs, did any more harm than does the mere pedestrian.

★

That, however, is for the Trust to decide: they have acquired the rights common to property-owners. Deciding upon prohibition, however, their straightforward course would have been to spend a few shillings in erecting warning boards on the access roads (there are only two). Instead of which, the local authorities have lent themselves to the wholesale trapping of unwary motorists, under a little-known clause of the new Road Traffic Act—that which makes it an offence to take a car more than fifteen yards from a public highway. The local policeman, whose time would be better spent dealing with the regulation of the heavy traffic on the main road, devotes his week-ends to lurking in hiding and then foot-slogging after unwitting malefactors; and the Bench fines 'em in droves out of hand, at every petty sessions. Thus is fair play set at naught and, incidentally, public and private time and money squandered in a time of national economy.

ASTRAGAL

Competition Result

Messrs. C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A., the assessors in the competition for the proposed tuberculosis hospital at Sully, near Cardiff, for the Welsh National Memorial Hospital, to be erected at an approximate cost of £150,000, have made their award as follows:

First premium (£400), William A. Pite, Son and Fairweather (London); second premium (£300), Lanchester and Lodge (London); third premium (£175), Stanley Hall and Easton and Robertson (London); fourth premium (£100), Todd and Thompson (Bristol).

It is hoped to publish the winning design next week.

Emblems borne on the bridge which connects the north and south blocks across the roadway. Between the flambeau and the winged staff are the coats of arms of the Port of London, the City of London, and the City of Westminster, respectively.

The keystone of the semicircular bridge-arch, above Page Street, is carved with a presentment of Father Thames.

THAMES HOUSE

DESIGNED BY SIR FRANK BAINES

THAMES HOUSE, Grosvenor Road, Westminster, has been designed in harmony with its older neighbour, Imperial Chemical House, of which Sir Frank Baines was also the architect, in a modern rendering of English Renaissance. Steel-framed and fire-resisting throughout, the buildings are clothed in white Portland stone, rising from a base of polished grey granite, and are finished with a steeply-pitched roof covered with slabs of faience. A notable feature is the great archway spanning Page Street and connecting the two blocks at third- and fourth-floor levels, which will be crowned by a group of statuary in bronze, representing the commerce of the British Empire, by C. S. Jagger.

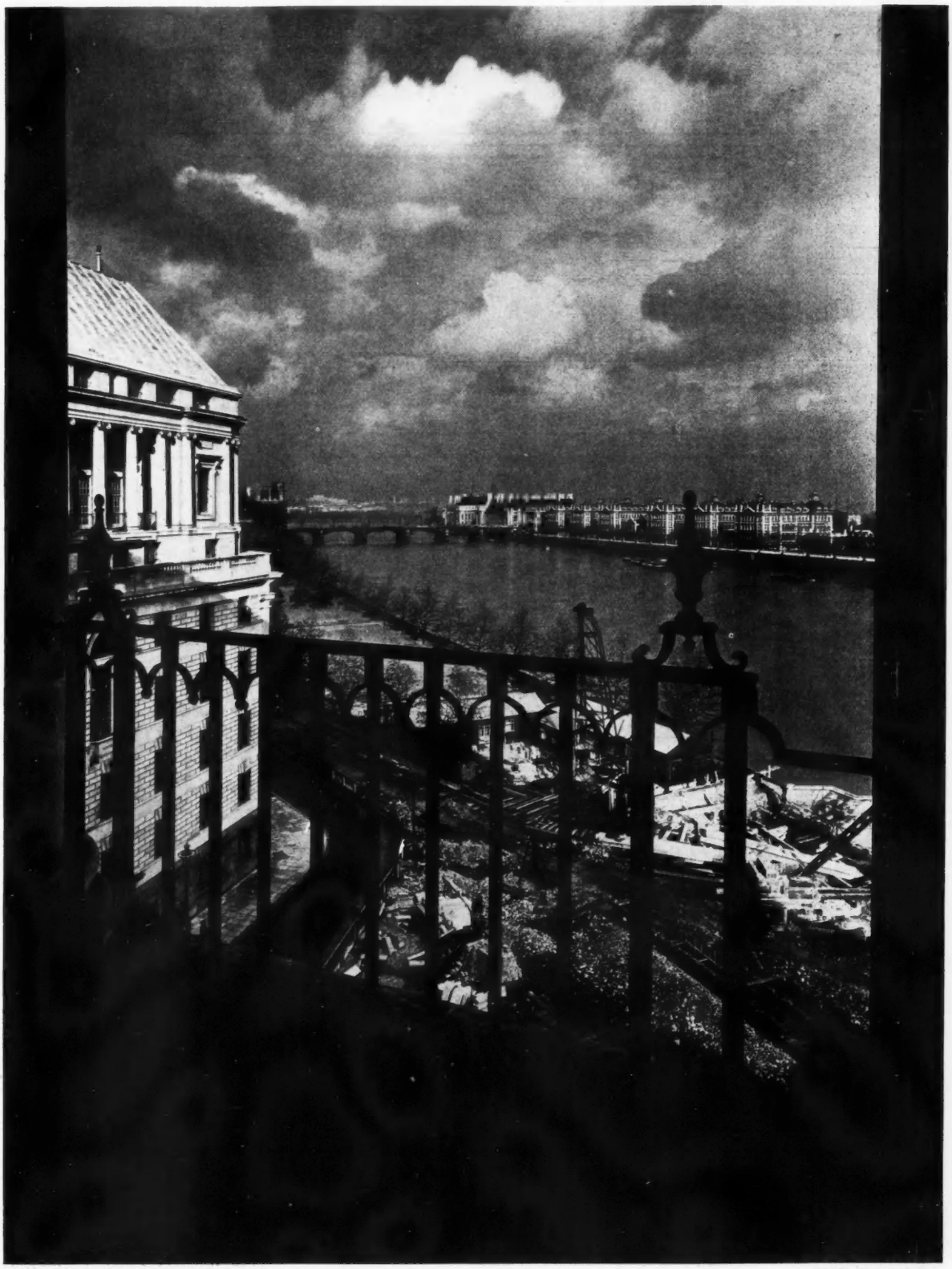
Each block comprises eleven floors, the two lowest of which are below ground, and are carried through under Page Street, thus occupying the whole area of the site. It is claimed that they form the largest basement stories in London, and they are specially designed to be perfectly dry. As the floor level of the lowest, or sub-basement, is some eighteen feet below high-water mark, very special measures had to be taken to withstand the percolation of water from the river. To this end, the whole site, including that part of Page Street which passes between the two blocks, is enclosed in a massive retaining wall, the construction of which was carried out in sections behind a double wall of steel sheet piling. Excavations were then made for the massive grillages destined to carry the stanchions.

The final step was to cover the whole site inside the retaining wall with a thick bed of waterproofed concrete, which, together with the heavy retaining wall, forms an enormous tank, entirely impervious to water, in which the whole building stands. On the foundations so constructed arises the steel frame of the building. Pipes, conduits and similar engineering requirements were installed concurrently with the steelwork, so saving much of the time and labour that would be expended in putting them in later.

Following closely upon the steelwork come the hollow tile reinforced concrete floors, which are built in as soon as possible, both to stiffen the steel frame and to serve as working platforms for subsequent operations.

There is nothing haphazard in the way parts of the structure are used to help in the erection of other parts. On the contrary, every operation throughout the work is carefully timed, both for beginning and completion, with close consideration of simultaneous and following operations, so that there may be no overlapping on the one

A general view of Thames House from across the river, showing its relation to Sir Frank Baines's slightly older building for Imperial Chemical Industries, and to the new Lambeth Bridge, still only in process of erection. Traditional though they may be in style, the new group embodies the most modern methods of building, materials and services of all kinds; in fact, it is thought to be the biggest, most conveniently fitted office building in two hemispheres.



Thames House, Grosvenor Road, S.W.] [*By Sir Frank Baines.*

A pageant of Thames-side at Westminster is spread for a spectator on the colonnade at sixth-floor level. The course of the river at this point is almost due north, and Westminster Bridge spans it from west to east. On the right, beyond the orderly piles of St. Thomas's Hospital, may be seen the London County Hall, its completing wing hardly yet out of the scaffolding. Nearer below is the new embankment roadway in the making.

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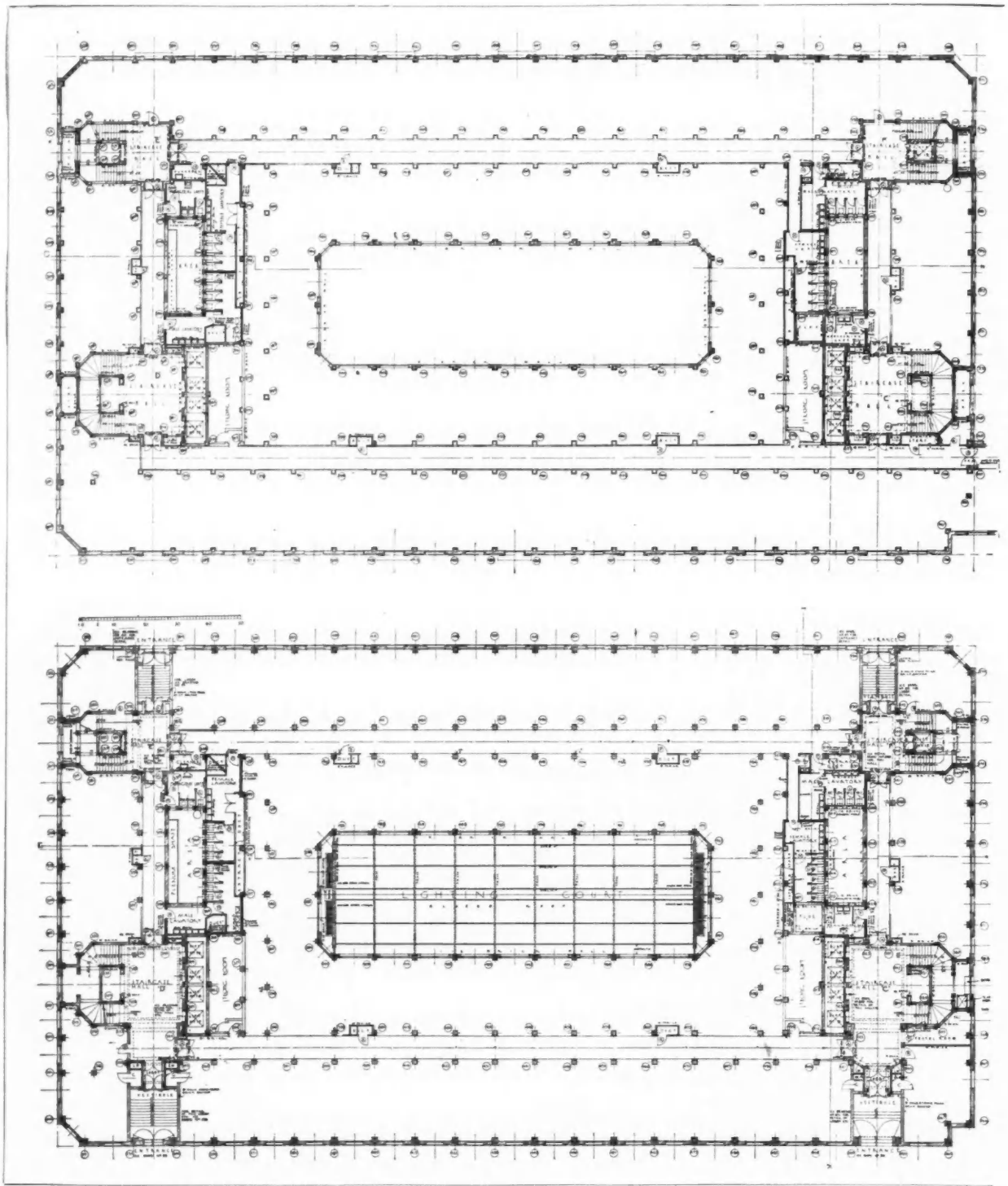
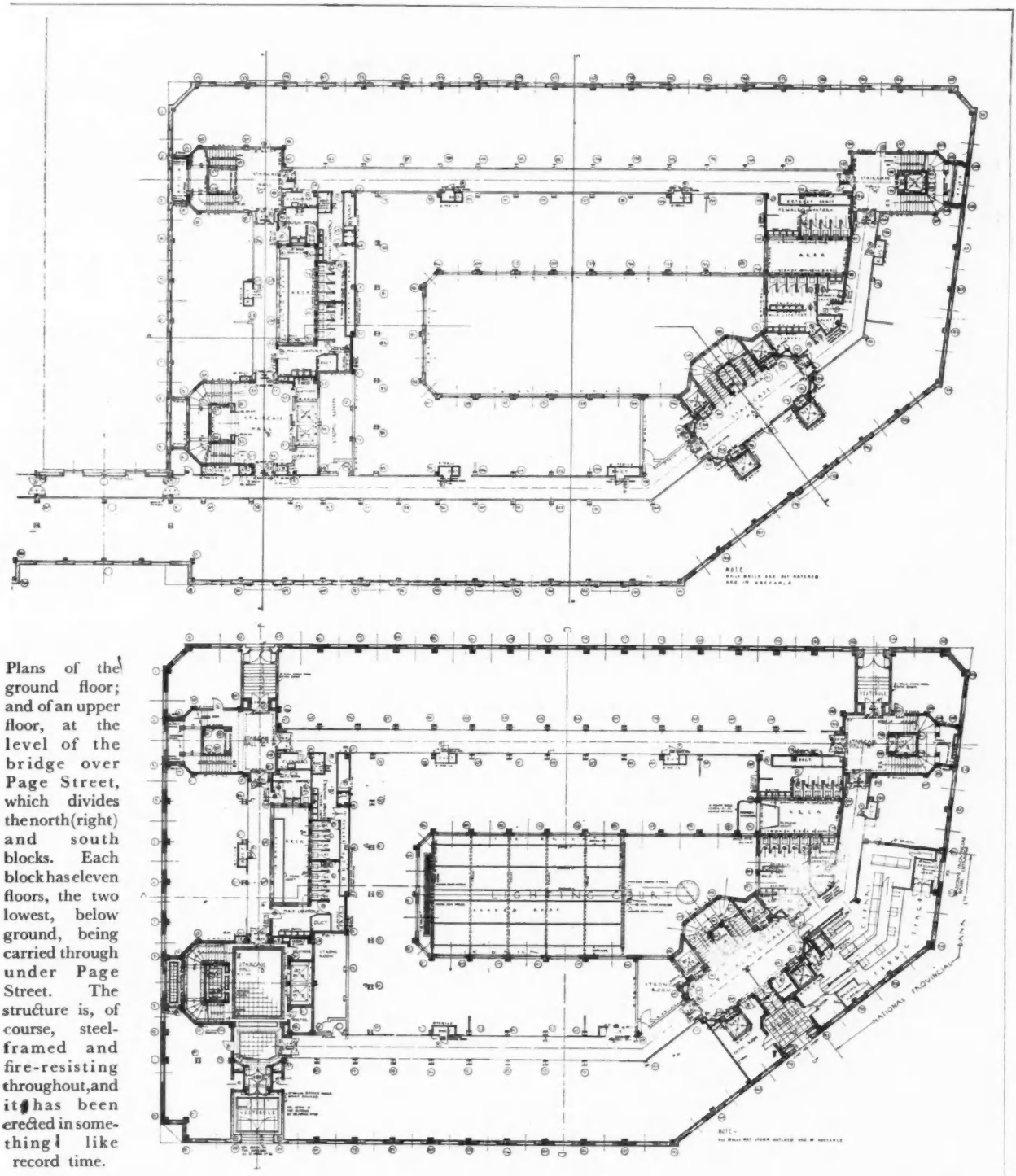


Thames House, Grosvenor Road, S.W.]

hand or loss of time on the other. The whole series of operations is carefully charted, before work actually begins. For instance, the precise order in which the steel members are to be erected and the cranes moved from section to section is all determined beforehand, and the programme of work drawn up must be rigidly adhered to. It is only thus that work has been speeded up to an extent hitherto unknown in this country, so that steelwork up to 800 tons has been erected in one week and floors up to 30,000 square feet laid.

The roof is a daring innovation : it was necessary to use a roofing material to harmonize with the stone slabs laid on the roof of Imperial Chemical House, and yet it was desired to avoid the great weight of the latter. So, after numerous experiments, it was decided to use faience, made in long slabs, with a dull surface very closely resembling Portland stone, but one which will withstand the worst efforts of the sulphur-laden atmosphere of London : they are laid over a waterproof covering



Plans of the ground floor; and of an upper floor, at the level of the bridge over Page Street, which divides the north (right) and south blocks. Each block has eleven floors, the two lowest, below ground, being carried through under Page Street. The structure is, of course, steel-framed and fire-resisting throughout, and it has been erected in something like record time.

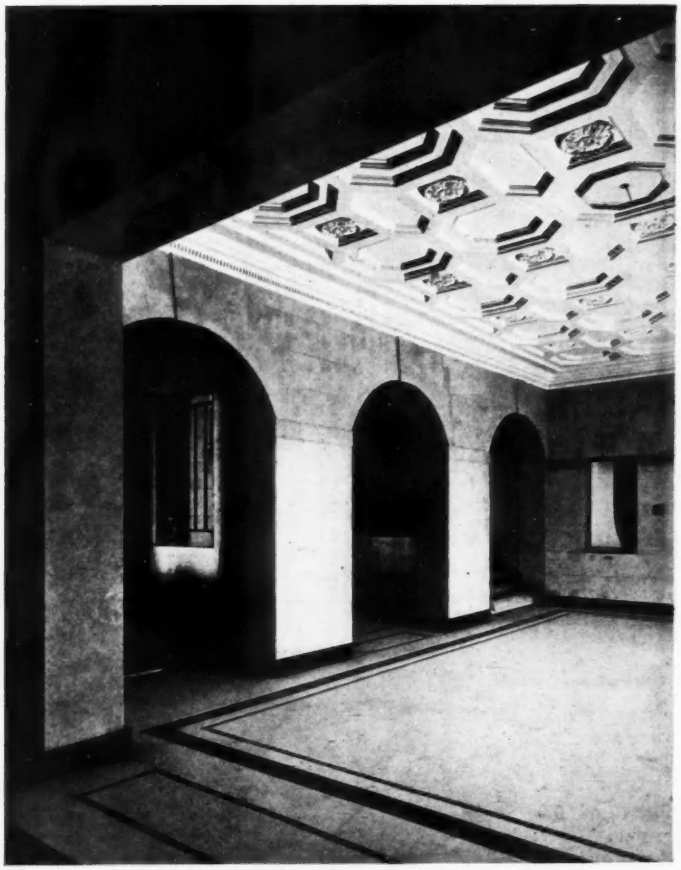
[*By Sir Frank Baines.*

composed of lead and bitumen.

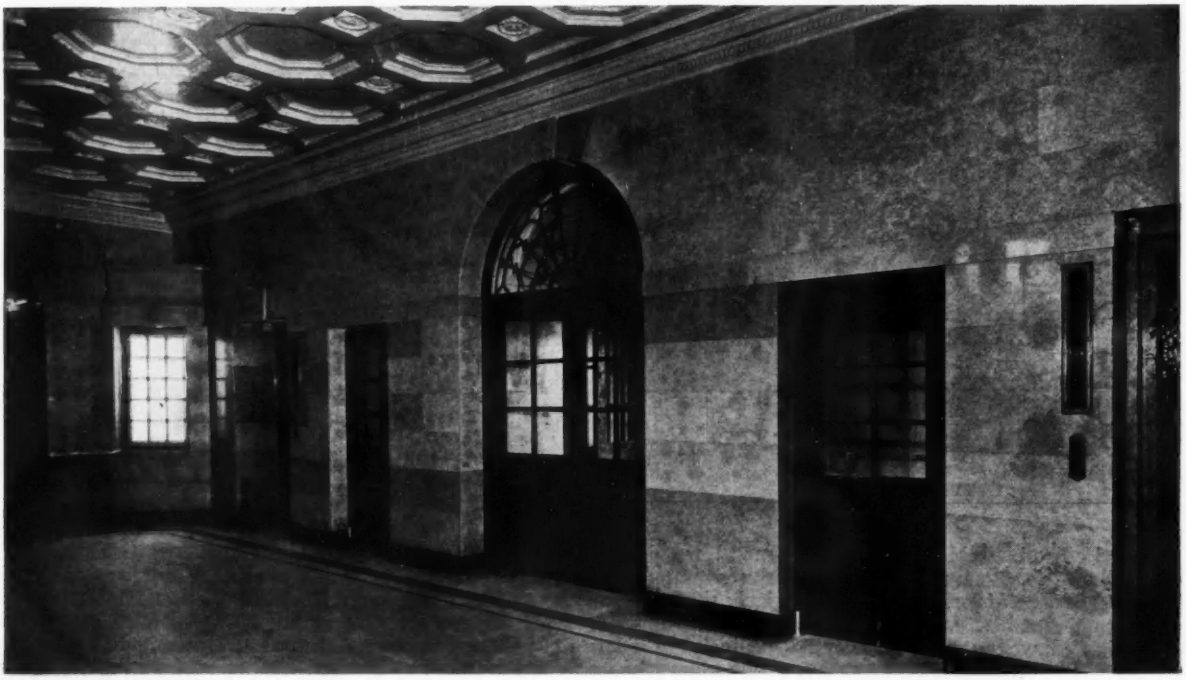
The offices in these two great blocks present more points of interest than can be catalogued here. Lofty, abundantly lighted, well warmed and ventilated, fitted with every device making for convenience, comfort and efficiency, they are ideal working places. All rooms on the main river fronts command wonderful panoramic views of the river and the metropolis, particularly those on the seventh floor, which can be finished, with lofty barrel ceilings, to form magnificent suites, high above the noises of the street.

From the very inception of the new buildings the most meticulous attention has been given to every detail of the equipment and operative services. To name but one, a unique feature of the heating installation enables the temperature of any room to be maintained automatically at any temperature desired by the occupant: a pointer on a small instrument on the wall of the room is rotated until it indicates the desired temperature—that is all!

The sixth-floor colonnade, from which the study reproduced on page 667 was taken.

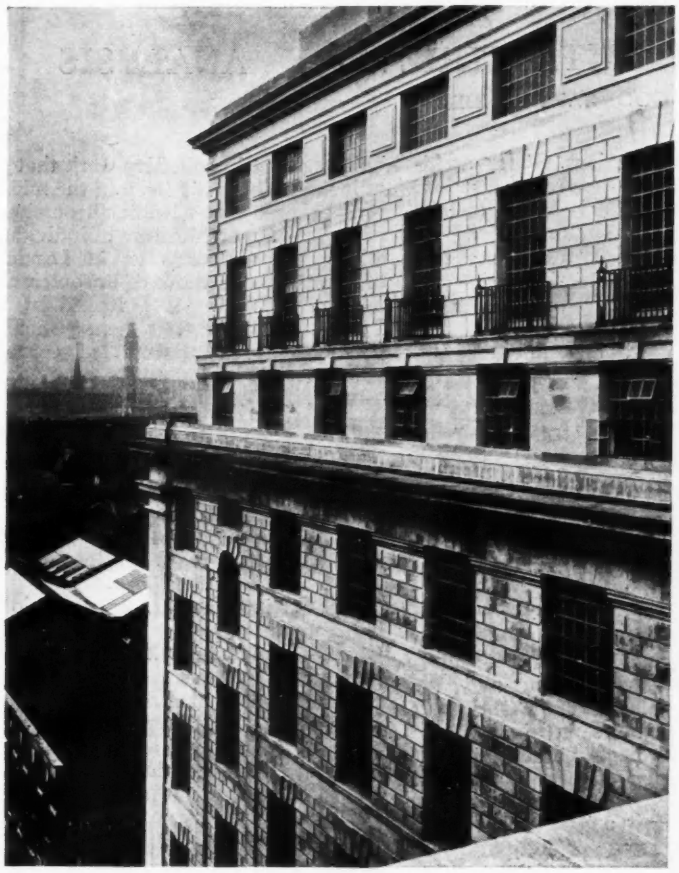


Staircase hall B (see ground-floor plan, page 669). On the left are the staircases; on the right the lifts; behind the camera the street doors.

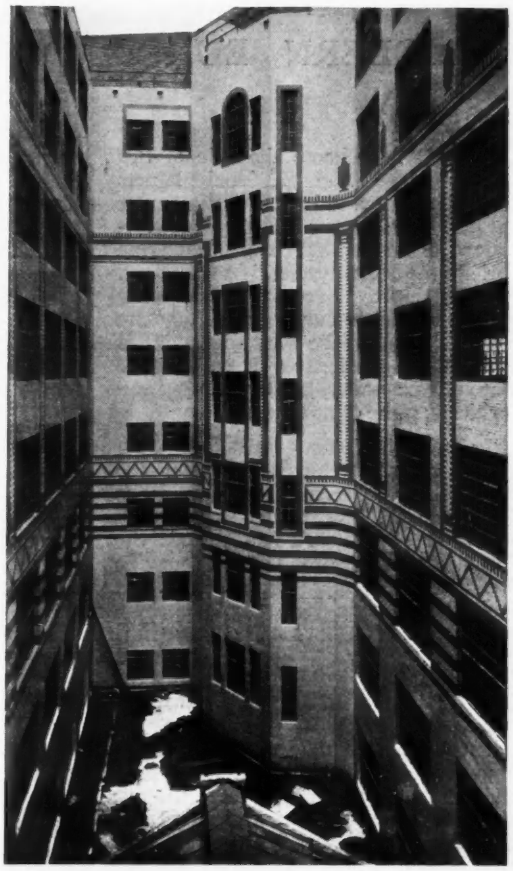


Thames House, Grosvenor Road, S.W.]

The north entrance to the north block. This is, so far as the term is applicable, the main entrance, being the principal feature of the splayed end facing the traffic-circus-to-be, now under construction at the west end of Lambeth Bridge.



From the connecting bridge there is a panorama of the parts of London about Victoria. A feature is the campanile of Westminster Cathedral.



The north lighting court, showing the decorative use of glazed cream and mauve tiles.

[*By Sir Frank Baines.*

The seventh-floor staircase hall, above the entrance facing Lambeth bridgehead. The staircase halls are illuminated by "artificial sunlight" windows, giving a novel effect of sunshine. The office floor space available for tenants totals 617,334 square feet.

MODERN EUROPEAN ARCHITECTURE: AN ANALYSIS

BY H. S. GOODHART-RENDEL

I DID not choose the title of this lecture. The Sessional Papers Committee did that. I remember at my preparatory school a general-knowledge paper that began, "Describe briefly the Solar System." I had a try. I am going to have a try now, not to describe Modern European Architecture (since I imagine we want to get out of this building before we have to move into our new one), but to analyse, and criticize, some of its tendencies.

The Art of Architecture

The art of architecture is not the same thing as architecture, any more than the art of speaking is the same thing as speech. Architecture is the production of the architect, who may be an artist, but more often is not. If this sounds rude, it is because people misuse the term "artist" so ridiculously. They call cooks artists, and photographers artists, and trapezists artists; and if an architect wants the same appellation in the same sense, then I am sure that all chartered or qualified or registered architects, or whatever we are at the moment, are entitled to it. But architecture is an art upon a different footing from that of cookery, of photography, or of acrobatics, and to maintain that a large proportion of the men that make an honourable living by providing the design of buildings and supervising their erection must be artists in the sense that painters and sculptors should be artists is to demand an impossibility. For one thing, the public would never stand it. Also, artists do not grow on every tree, and there never could be enough to go round. There never have been; if you look at the buildings of any good period you will see that the great bulk of them is the work of sound designers using other men's inventions in a sober, reasonable way.

The great bulk of the buildings of today is the work of doubtfully sound designers using other men's inventions in a way that is neither sober nor reasonable. Much of it is definitely flagitious and is supposed not to be the work of architects at all, a supposition that inquiry too often upsets. Even if we could bring the perpetrators to book, I am not sure that architecture is simple enough any longer to be produced satisfactorily on the old system of a few leaders and a great many followers. For one thing, the followers refuse, in this individualistic age, to keep to heel, and do a good deal of damage on their independent excursions. The architectural profession needs reorganization.

This reorganization is bound to take place soon in Europe, and it may be that it is already under way.

Individualism and Collectivism

It would be so natural to pick out a lot of buildings of one period and country, find their greatest common measure, if any, and present the result as modern French or German or Italian architecture; it would be so natural if I did that, that I should not blame you if you let me get away with it. I take it, however, that the only adequate excuse for talking any more about a subject that has been so very much described and discussed lately must be a serious attempt to get below the surface, and very near below that surface we find a bitter conflict between the forces of individualism and collectivism. In England you find the idiosyncratic buildings of Sir Giles Scott being built at the same time as the almost standardized building of the Office of Works; in France you find the Ecole des Beaux Arts trying to swallow and digest a good deal of rather peppery new food; in Italy you find clever and provoking modern decorators refusing to be crushed by the stereotyped grandeurs of the traditionalists; in Germany you find expressionism waging solemn war with functionalism to the probable amusement of some delightfully unrepentant experts in Baroque; in Spain I fancy that you do not find much, and in Denmark and Sweden you find some of the most personal and emotional and some also of the most impersonal and unemotional architecture in Europe. I have no idea what you find in most of the countries I have left unmentioned, but I imagine it would not be remarkable for homogeneity.

I do not like the word collectivism that I have opposed to the word individualism, but I cannot find a better. What I mean by it is well exemplified in the design of most of that enormous output of post-war German architecture that has been illustrated in our architectural press. Such architecture, which is not without merits, is the sort of thing that I believe anybody sufficiently intelligent and painstaking could be trained to do. What it owes to impulse it owes to the sort of disciplined impulse of which a mass is capable. I find it generally decent and reasonable and prosaically expressive of its purpose. I never can remember which architect did which building, but in collective work that is as it should be. If I lived in the midst of it I should soon become unconscious of it; and the architecture of individualism that surrounds us in London often makes one think of unconsciousness as a boon. If I looked at it I should be bored, but then, I should not look at it. Except, of course, where it was trying to be impressive—one would notice that because everything would be so large. It would make much pleasanter surroundings for one's daily round than the collective architecture of America, which is covered with dead bits of things that one was fond of when they were alive. But I do not know what more for it one can say.

I do not imagine that any conscious effort upon our part can determine whether we have this kind of thing for our future European architecture or we reform but retain our individualism. I have said that our profession needs reorganization, but I am not sanguine enough to think that the reorganization can be brought about by Act of Parliament, or even by concerted action among architects. I fancy that the decision between collectivism and individualism will depend upon how the individualist meets the advance of the Machine—the Machine that grows in power and cleverness every day, and that takes more and more work from our hands and needs more and more control by our brains. The Machine and the collectivist are excellent friends already—they are rather like each other, and fit in with each other's ways.

The "New Architecture"

Journalists are apt to write nowadays of our latest building fashions as the New Architecture, and I have nothing to object to in the description except that the thing described often isn't architecture and generally isn't new. That it isn't architecture may be a serious defect if it is displayed on occasions when architecture is required, on occasions when to use only simple engineering would be stupid and uncivilized. That it isn't new can matter to nobody except to the journalists, to whom, if it isn't new, it isn't news.

If we may reasonably doubt the existence of a "new architecture," or its possibility, we cannot disregard the great desire for it that underlies all the efforts we see to bring it into being. That desire must spring from discontent with the old, a discontent deeper and more respectable than any idle wish for change.

[Extracts from a paper read before the R.I.B.A. on Monday last.]

STAND AT OLYMPIA

(Commercial Motor Show)

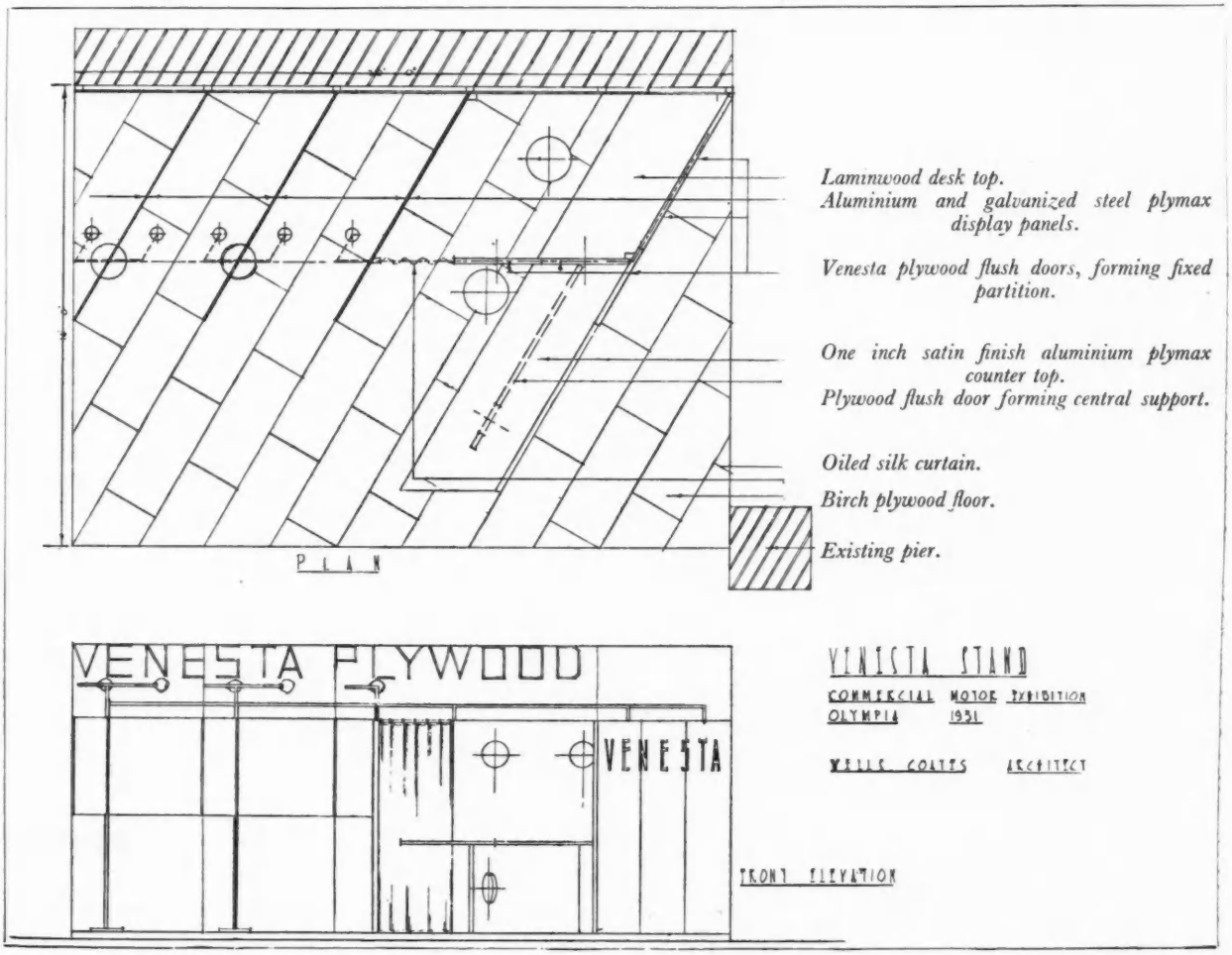
DESIGNED BY WELLS COATES

A photograph of the stand under its own illumination. The curtain to the office compartment is scarlet oiled silk; the steel framing and certain panels, and the faces of all lettering, are cellulosed pillar-box red.

THE site of this stand, in the area between the Empire Hall and the Main Hall, had many advantages from the point of view of isolation, and of traffic passing by, but a very large column of the Exhibition Building (shown on the accompanying plan) had to be reckoned with.

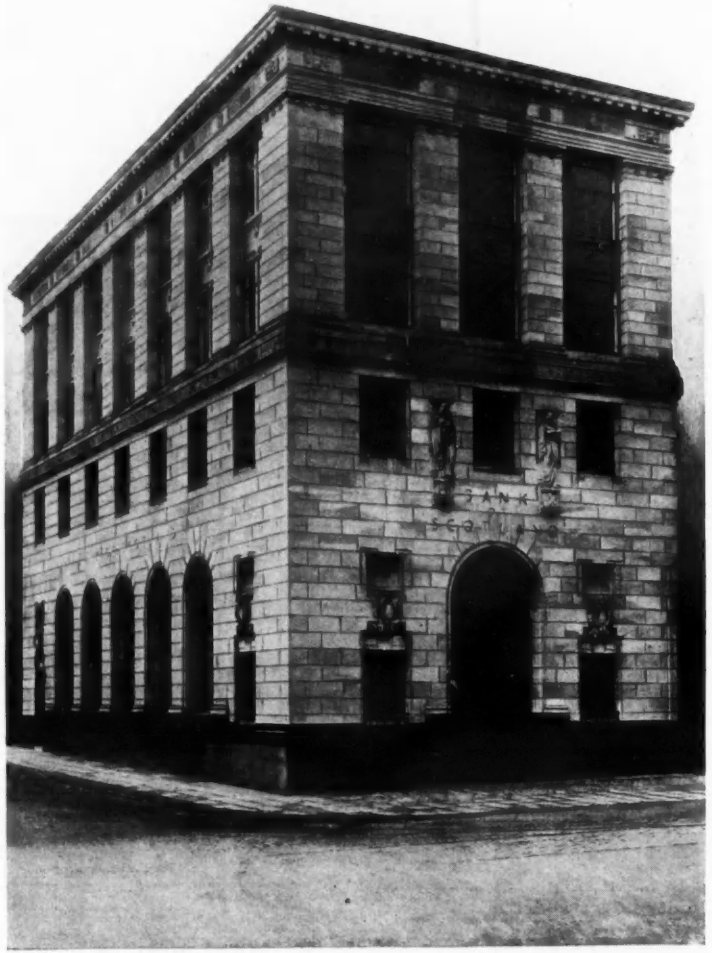
This column, in fact, together with the clients' requirements, which included the provision of a relatively large public space for salesmen, etc., determined the rather unusual plan-form of the stand. It will be seen that it is possible to view the whole of the display and the lettering at a glance from a great number of sight-lines.

The partition forming the office enclosure is made up of standard plywood flush doors, fixed with light framing. The counter has a top of 1-in. double-sided aluminium plymax, the top satin-finished. The display panels —all plymax—are supported by a light steel frame, which carries, in addition, the illuminating equipment, and forms a sort of "eyebrow" to the stand. The stand is also floodlit from the top of the column. The floor is constructed of birch plywood.



THE BANK OF SCOTLAND: Branch Office, 235 Sauchiehall Street, GLASGOW

DESIGNED BY JOHN KEPPIE AND HENDERSON



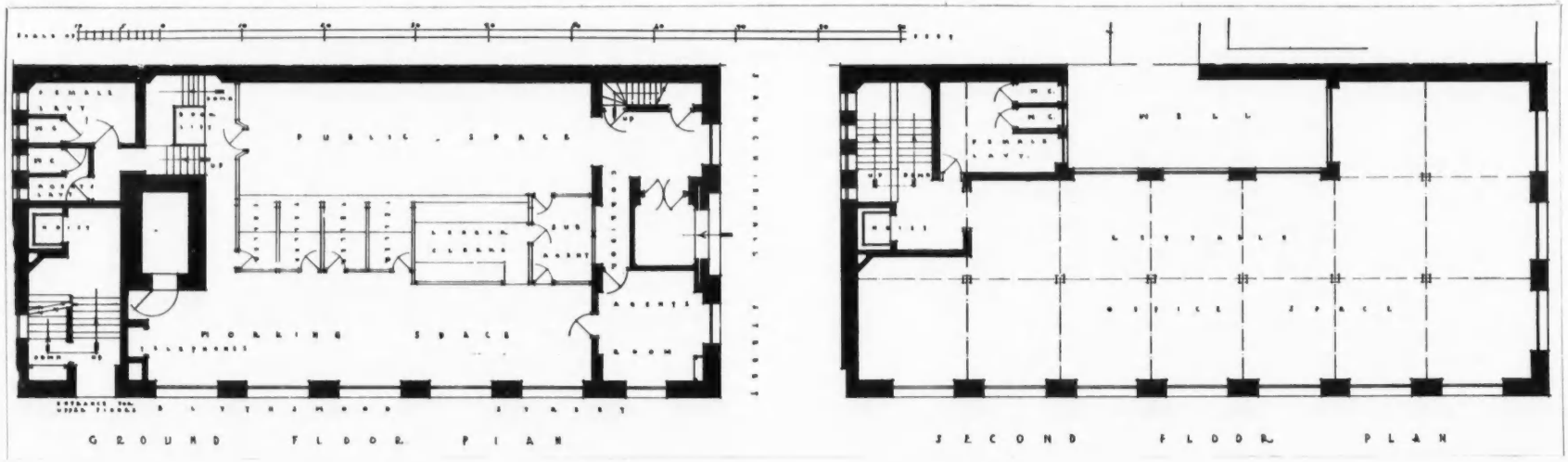
THIS building takes the place of old premises previously occupied by the Bank. The whole of the ground floor is occupied by the banking hall and other bank accommodation, the upper floors being let as offices.

The structure is steel-framed and fireproof, the external walls being of white sandstone, from Auchenheath Quarry, with granite base. The bank windows and door are bronze, the upper windows being of steel.

The walls of the bank are lined with Napoleon marble up to the level of the coved plaster ceiling. The fittings and furnishings throughout are of Spanish mahogany.

The main front to Sauchiehall Street, and the return to Blythswood Street (left of picture).

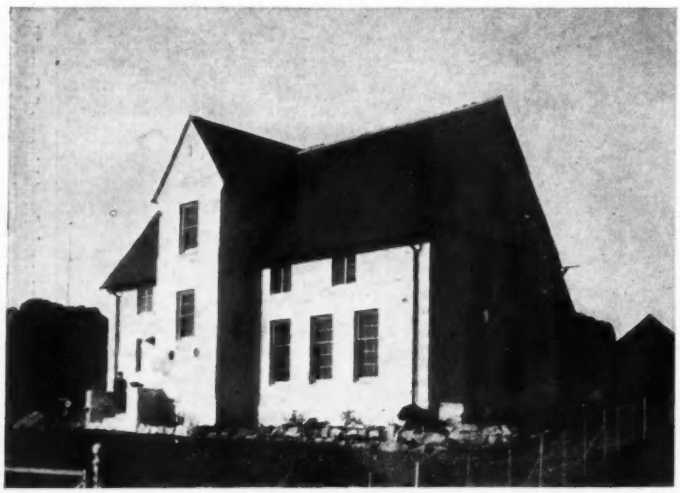
The figures, "Prudence" and "Security," and the bronze coat of arms, are modelled by Benno Schotz.



Plans of the ground, and of a typical upper floor, designed for letting off; and views from either end of the banking hall. This has a coved and coffered plaster ceiling, above walls of Napoleon marble, and fittings and furnishings of Spanish mahogany; the public space is floored with marble, the working space with oak blocks.

A STONE HOUSE IN ARGYLLSHIRE

DESIGNED BY POWYS AND MACGREGOR



The main front, facing south. The five large windows on the ground floor light the holiday-room. The staircase is in the central gable.

The house from the south-west, showing the main and side doors to right and left, respectively.

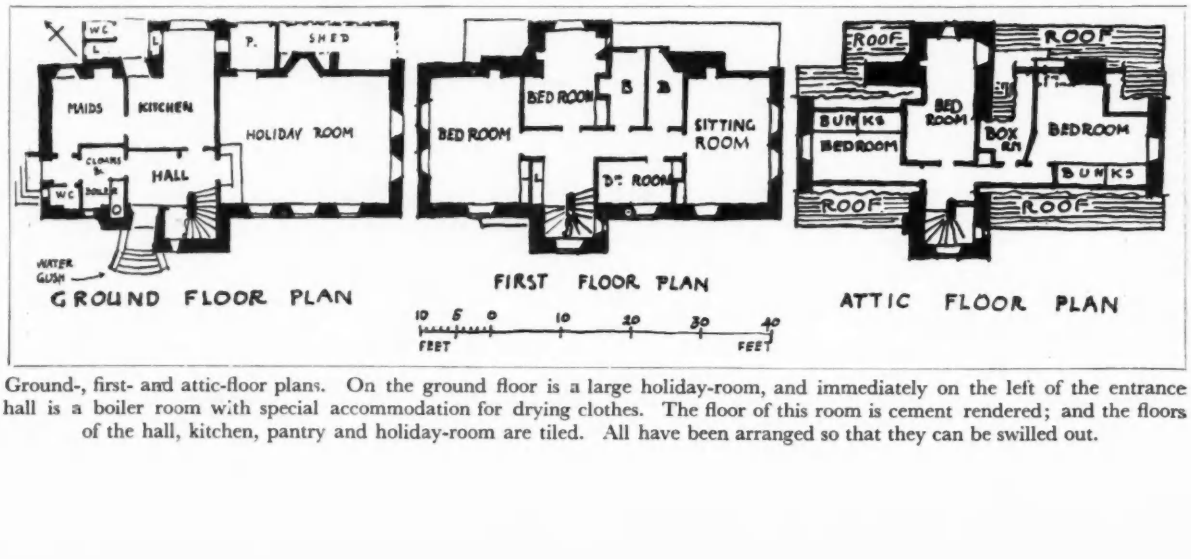
A view from the north-west. The walls are of stone, quarried on the site, and whitened; and the West Highland tiles used for the roof are almost black.

"DUN A' BHUILG" is situated on the wild, rocky promontory of Kintyre, and its remote and exposed situation naturally influenced the planning and construction.

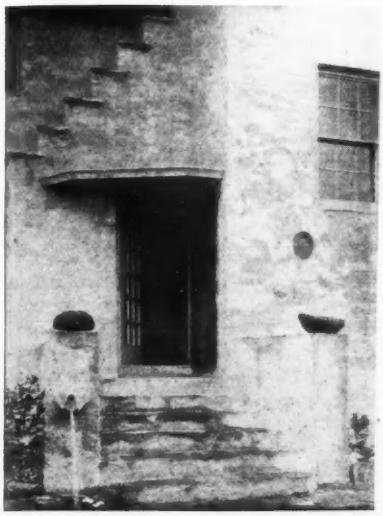
The interior of the house was the main consideration, and the elevations have nowhere been allowed to impose themselves on the plan.

The walls and chimneys are of stone quarried on the site, the partitions being of brick on the ground floor and lath and plaster on the upper floors. The walls are whitened on the outside, the inside being lined with wallboards for greater warmth, and also to hide any signs of damp that might be forced through the stone walls by the winter gales. The bylaws of the district stipulate that this method should be used, with an alternative of plaster on wall battens.

The house is covered by a main ridge roof and by a subsidiary cross ridge roof which is much narrower, but



Ground-, first- and attic-floor plans. On the ground floor is a large holiday-room, and immediately on the left of the entrance hall is a boiler room with special accommodation for drying clothes. The floor of this room is cement rendered; and the floors of the hall, kitchen, pantry and holiday-room are tiled. All have been arranged so that they can be swilled out.



The main entrance. The water supply is by gravity from a burn. The flow is continuous, and the overflow gushes out of the wall on the left of the steps.

rises from plates some 7 ft. 6 ins. higher than those of the main roof. Thus the tie ceiling rafters of the subsidiary roof are level with the collars of the main roof, and the subsidiary roof masters the main one by 12 to 18 ins. West Highland slates have been used.

The water supply is by gravity from a neighbouring burn. The flow is continuous, and there is no ball valve to regulate it. The overflow is taken in pipes to the side wall of the front steps, where it gushes out. As the owners of the house spend much of their time yachting and fishing, and have several children, this running water outside the house is useful in many ways.

The staircase is placed in the central gable by the front door. The stairs are of solid Scotch fir baulks, built into the walls around a central pillar, which has a rope in the place of a handrail.

Looking from the entrance hall into the living or holiday room. The window shown overlooks the south-east front. The staircase is on the right of this door.

House in Argyllshire.] [*By Powys and MacGregor.*

One of the two bedrooms on the attic floor, which are fitted with bunks, planned in tiers, one above the other, for the use of the children.

LETTERS FROM READERS

Rubber Flooring

SIR,—While our particular interest is in floor coverings, your special issue for November 4 must appeal to all connected with the building industry, and in particular to firms concerned with modern materials.

In his article, Mr. Williams, due no doubt to restricted space, does not deal fully with this material. British manufacturers could prepare rubber in large sheets equally as well as a Continental preparation, but is there any advantage in employing such a type? First, a soft quality is necessary to ensure unbroken joints in vulcanization, but a soft quality is entirely unsuitable for a rubber floor if permanency is required. The slightest breakage of bond between the rubber and sub-floor will enable the rubber to stretch, when trouble and dissatisfaction are inevitable. Apart from this undeniable fault, the colours of the Continental flooring are not fast.

A reference is made in the article that tiles for good work should not be less than $\frac{3}{8}$ in. thick. Although it is obvious that such a thickness will supply longer life than $\frac{1}{4}$ in. thick, an instance of satisfactory service has recently been brought to notice where over fourteen million people have walked over a tiled floor, $\frac{1}{4}$ in. thick, and the wear is yet negligible.

It should be emphasized, however, that there is a difference between drum-cured flooring and press-cured tiling. While generally the quality is similar before vulcanization, the resultant finished article is different in wear-resisting properties. It is desirable, therefore, that tiles should not be cut from flooring, not only on account of the superiority of press-cured tiling, but the latter, being cured flat in a press, will not curl, a recognized fault with flooring when cut into tiles.

No rubber will be satisfactory for a prolonged period if laid on an unsuitable base. If not smooth, irregularities will obviously show on the upper surface of the rubber, irrespective of its thickness.

The sub-floor must not only be dry, but permanently so; therefore, it is a waste of money and good material to lay rubber on a cement-rendered concrete floor when the concrete is direct on earth.

G. C. SUMMERFIELD,
(THE LEYLAND AND BIRMINGHAM RUBBER CO., LTD.)

Lintels and *Lintels*

SIR,—In the JOURNAL for November 11 I noticed that Astragal, under the paragraph heading, "The Importance of being Mr. Ervine," quotes, rather sardonically, a portion of one of Mr. Ervine's dramatic criticisms. I refer especially to the part which reads "Sir Charles leant against a lintel."

Is Mr. Ervine not entertaining a very popular author's misconception? So eminent a literary stylist as the late Joseph Conrad repeatedly refers in his novels, *Nostromo* and *Almayer's Folly*, to men who "lean against lintels." But there may be some excuse for Mr. Conrad, as he was essentially a seaman, and lintels are notoriously low in ships! ALEX. CULLEN

Specialists and Sub-contractors

SIR,—The negotiations between the R.I.B.A. and the National Federation of Building Trades Employers in connection with the New Form of Main Building Contract, have revealed the necessity and desirability of having a properly constituted federation representative of sub-contracting interests generally.

An *ad hoc* negotiating committee was formed at the end of 1928 to protect the interests of sub-contractors and specialists in general. This negotiating committee was supported by two groups of sub-contractors:

(*a*) The Federation of National Associations of Sub-Contractors (Building and Allied Trades), covering master plasterers, master painters, master plumbers, and master slaters and tilers;

(*b*) The Joint Committee of specialists associations, covering twenty-eight important associations, and by the Builders' Merchants Alliance as representing the suppliers of goods.

This *ad hoc* committee was invited to meet the representatives of the R.I.B.A. and the National Federation of Building Trades Employers, and, after many conferences, the New Form of Main Building Contract was finally agreed upon and published.

Outside these large groups there are numerous associations of sub-contractors in no way federated so as to be in a position to deal with questions (apart from wages) which arise from time to time affecting the interests of all. For example: at the present moment, following the publication of the New Form of Main Contract, a standard form of sub-contract for building work has to be negotiated with the builders. For this purpose, another *ad hoc* committee has been formed to carry on such negotiations. Furthermore, the interim report of the Building Industry Council of Review makes it clear that the whole question of the employment of specialist firms is under consideration by the R.I.B.A., and that any developments, probably of far-reaching character, should be watched in the interest of specialists and sub-contractors by some properly federated and constituted body representative of all.

The question is being considered by a group of sub-contracting interests who make the following proposals:

1: That an association with headquarters in London should be formed, entitled "The National Federation of Associations of Specialists and Sub-Contractors."

2: That membership should be restricted to associations of trades interested in sub-contracts and specialists' work of the building and allied industries.

3: That the subscription should be nominal to cover expenses. (It is possible that such secretarial services as may be necessary, including the use of a suitable room for meetings, would be obtained in London at comparatively small cost to the Federation.)

4: That the objects of the Federation should be to deal with all questions affecting the interests of sub-contractors and specialists in general (excluding wages); to formulate and to recommend for adoption by the constituent associations courses of action consistent with the general policy agreed upon by the Federation, and in particular to consolidate the good relationship and understanding between specialists, sub-contractors, architects, surveyors and builders.

It is necessary to emphasize that the Federation would in no way interfere with questions of wages nor usurp the functions and work of the constituent associations, but would deal only with questions where concerted action may be necessary and desirable.

Sufficient support is already assured the Federation to make it possible to summon a meeting to be held in London in January next to take further necessary steps. T. A. MACINTYRE

(FINSBURY COURT, E.C.2)

Composition for Roofs

SIR,—I have had occasion to use a composition on roofs where the cost had to be seriously considered, and have tried several advertised compounds. My experience, however, has not been altogether satisfactory, as I find that (1) the life is too short owing to an early evaporation, or (2) that the material remains too tacky on the surface, especially in warm weather. May I ask if any of your readers have found a composition that gets over these objections? F. H. B.

[The Editor invites letters from readers who have experienced the same trouble as the above correspondent.]

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

PARLIAMENT was opened by the King on November 10. In the course of the debate on the Address in reply to the Speech from the Throne, Mr. McEntee, a Labour member, raised the question of housing.

He said that by building on a large scale, by mass production and standardization, prices could be reduced by 15 per cent. There were many thousands of men in the building industry out of work, and there was no earthly reason why they should not be employed except the lack of organization in the industry itself. He asked the Government if it was not possible for them to go particularly into the question of housing and to see if it was not possible to get mass production introduced and standardization, and to reduce costs. They could get by organization reductions in price that would mean the employment of 200,000 men, and it could be done within a year.

Rent Restriction Act

At question-time Sir E. Hilton Young, Minister of Health, said that the future of the Rent Restriction Acts and any amendments of the Acts would be considered by the Government in the light of the Report of the Departmental Committee which was recently issued. In the meantime it was proposed to prolong the operation of the present Acts by means of the Expiring Laws Continuance Bill.

Town and Country Planning Bill

Asked if it would be possible to re-introduce the Town and Country Planning Bill, Sir E. Hilton Young said that careful consideration would be given to this matter with a view to an early decision as soon as circumstances permitted.

Lighting of the National Gallery

Mr. Campbell asked the First Commissioner of Works whether he was aware that the lighting scheme of the lately erected western rooms at the National Gallery, containing early Italian pictures, had proved to be a failure, as the public could not see the pictures owing to lack of daylight; and would he obtain expert advice as to whether the structure of the rooms should be remodelled, or whether the daylight lighting of these rooms could be brought up to the standard of the rest of the National Gallery.

Mr. Ormsby-Gore said that he was aware that the lighting had been criticized, but the illumination of art galleries was a difficult subject and there were various opinions as to what constituted proper lighting. The gallery was erected in accordance with plans and a model approved by the Trustees and the donor, Sir Joseph Duveen. The decorative treatment also was settled directly by the donor in consultation with the Trustees. He regretted that he was not in a position, having regard to the need for national economy, at present to authorize further public expenditure on altering the gallery.

LITERATURE

THE ARCHITECTURE OF PLEASURE

THIS book consists of a number of photographs of modern cinemas, accompanied by plans, architectural and technical descriptions and details of the recording apparatus, prefaced by a short series of articles on the architectural, optical and acoustic problems of the modern cinema.

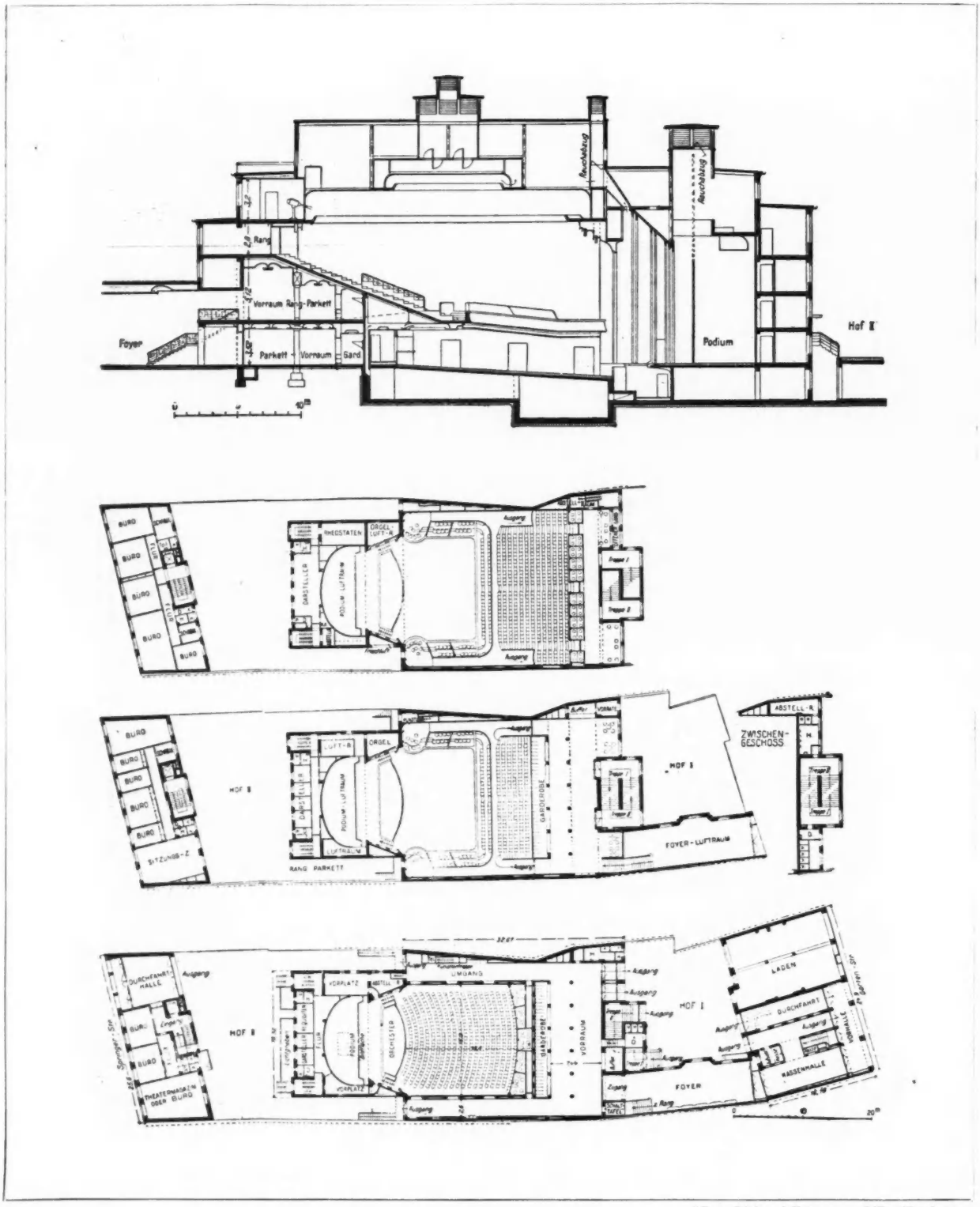
The English and American examples are particularly disappointing, and their inclusion gives a totally wrong idea of cinema construction here and in the United States. The compilers protest that the English and American does not realize, or, at any rate, carry out in his design, the elementary fact that the cinema is essentially a closed box with requirements entirely different to any other type of building and necessitating a style of its own. Certainly, judged from the examples chosen, their criticism is justified. One of the English examples looks rather like a city hall or public library, another is a glorification, if such term can be used, of mock half-timber work and entitled "The Tudor"; the American examples are all of the "atmospheric" type, mostly the work of John Eberson; one, the Palace at Canton, Ohio, is a monstrosity compared with the excellent German examples. In this particularly ill-assorted collection the work of Mr. Robert Cromie stands out, to quote Kipling, "like a sunflower against a tarred fence or a mustard plaster on a sack of coals."

Surely, however, this is not fair to English or American designers or architects. It is very possible that German cinema architects have, on the whole, better taste and a better conception of what a cinema essentially is: more probably they are less hampered by their clients. Certainly no one wishes to say anything to detract from their excellence. But, in a book entitled *Cinema Theatres*, without qualification, the reader is surely reasonable in expecting to find England,

[*From* Lichtspielhäuser und Tonfilmtheater

The stalls foyer of the Capitol Cinema, Breslau. Friedrich Lipp, Architect.

It is, on the whole, a disappointing book. The photographs are certainly extremely good, and the accompanying material makes it useful as a work of reference, but as a résumé of any particular style or technique it is too diffuse, and as a description of the modern style in cinema construction, too limited. Surely some examples from Paris and Stockholm might have been added.



[*From* Lichtspielhäuser und Tonfilmtheater.

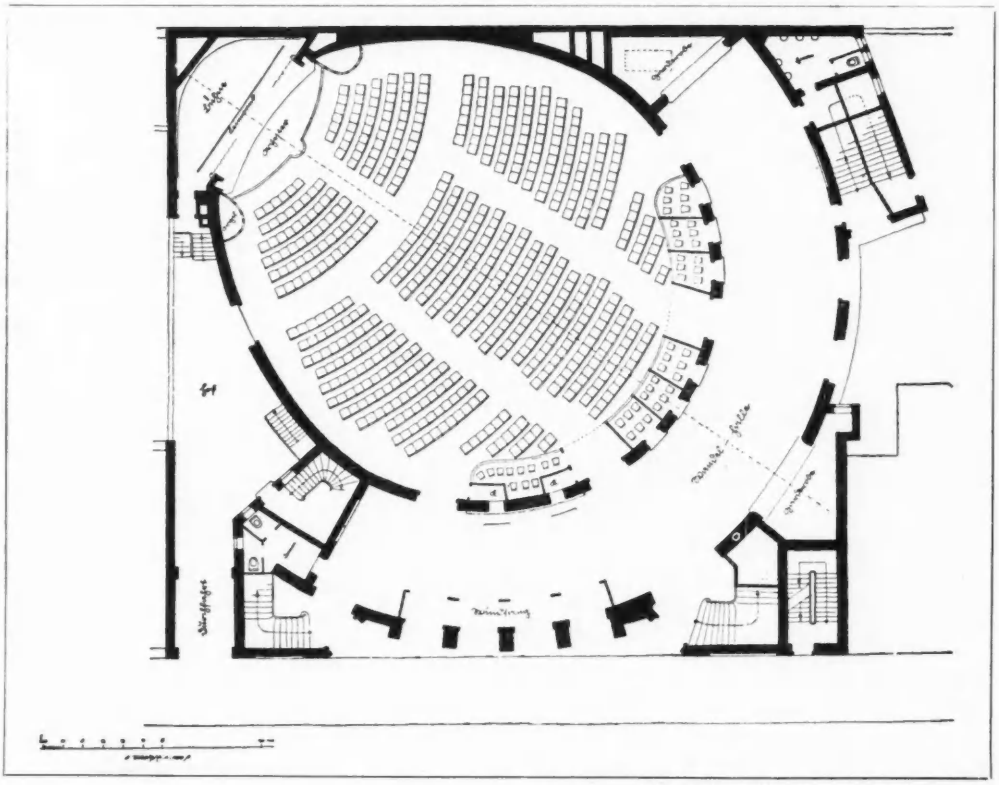
Stalls, mezzanine and upper-floor plans; and longitudinal section of the Capitol Cinema, Breslau. Friedrich Lipp, Architect.

America, France and Sweden represented by examples of their best work, which is not, after all, so far behind that of Germany:

Meanwhile, as a handy description together with illustrations of the best of modern German cinema theatres the book is extremely interesting. L. F. E.

Lichtspielhäuser und Tonfilmtheater. By Paul Zucher and G. Otto Stindt. Berlin: Verlag Ernst Wasmuth A. G.

The main entrance front of the Capitol Cinema, Mannheim. Paul Darius, Architect.



[*From* Lichtspielhäuser und Tonfilmtheater

Ground-floor plan of the Capitol Cinema, Mannheim. Paul Darius, Architect.

By E. W. Berridge.] (Pencil : 6″ × 8″)

At Rothenburg, Germany.

By A. B. Knapp-Fisher.] (Watercolour : 13¼″ × 7½″)

Wiltshire.

THE SKETCH CLUB

FORTY-FIRST SESSION

[*By R. H. McCartney.* (Pencil : 6½″ × 9½″)

St. Paul's Cathedral, London.

FROM THE ARCHITECTURAL ASSOCIATION EXHIBITION OF MEMBERS' HOLIDAY SKETCHES

By W. M. Keesey.] (Watercolour : 13″ × 9¼″)

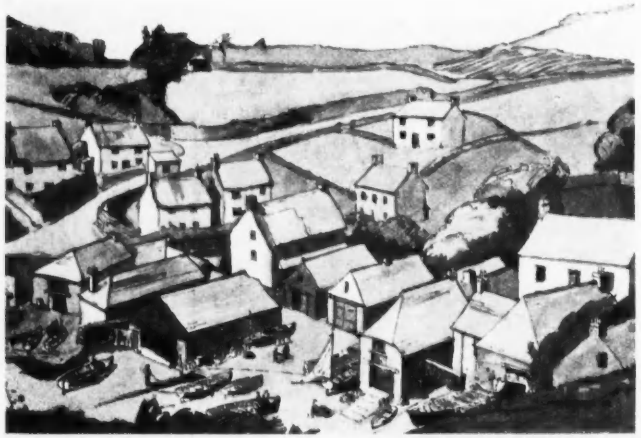
Cobbe Place, Lewes.

By G. Grey Wornum.] (Watercolour : 15½″ × 14½″)

Ragusa.

By E. B. Musman.] (Pen and bistre : 12½″ × 8¾″)

Horning Ferry.



By N. C. Westwood.] (Pencil and Wash : $11\frac{3}{4}'' \times 8\frac{1}{4}''$)

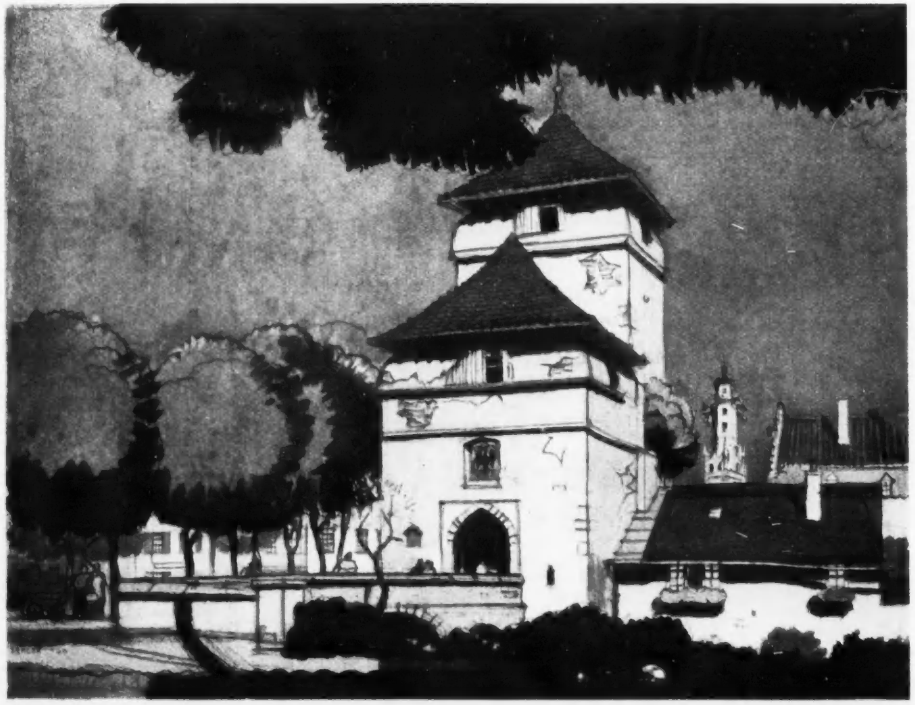
Cadgwith, Cornwall.

By J. V. Nisbet.] (Pencil and Wash : $11'' \times 8\frac{3}{4}''$)

Rothenburg, Germany.

By J. M. Clarke.] (Etching : $10\frac{3}{4}'' \times 7\frac{1}{2}''$)

Old Whitney.



By J. V. Nisbet.] (Watercolour : $14\frac{1}{4}'' \times 11\frac{1}{4}''$)

Nordlinger Berger Tor.

By J. V. Nisbet.] (Watercolour : $14\frac{1}{4}'' \times 11\frac{1}{4}''$)

Kelheim, Bavaria.

SOCIETIES AND INSTITUTIONS

ARCHITECTURE OF THE FUTURE

MR. JOSEPH EMBERTON, A.R.I.B.A., lecturing on "The Influence of Modern Material in Architectural Treatment," at a meeting of the Birmingham Architectural Association, held on November 6, said the times in which we lived seemed to be out of joint. We found ourselves in a situation in which the scientific inventions and mechanical improvements of the last quarter of a century necessitated fundamental changes in our social existence. Public authorities were building houses which cost in rent from 12s. to 15s. a week, while the people who lived in them could only afford from 8s. to 10s. Architecture affected this sad state of affairs in two ways: (1) the houses were costing too much, and (2) we were not obtaining the full value from mechanical devices used in manufacture on account of heavy overhead charges, created to some extent by out-of-date methods of building in factory, office and shop.

Generally, the houses which were being built did not give to working people the comfort to which they should be entitled in these enlightened days. We were still building more or less the same type of accommodation which had been provided for the last 300 years. We were not taking advantage of the mass-produced and scientific building materials which were so plentiful. The reason for this was that to obtain economy by the use of these new materials and services the unit dwelling must be larger than the cottage or a pair of cottages. We could not advantageously employ the steel frame or reinforced concrete, nor instal central heating economically in so small a unit as the cottage.

Another aspect of the present policy which provided accommodation for the masses by small detached or semi-detached cottages was the extravagant use of land and the destruction of potential food-producing areas or pleasure grounds, at the same time forming large scattered suburban areas, making it necessary for people in the centres of towns to pass through miles of dull and uninteresting regions in order to enjoy the pleasant conditions of the open country. The obvious solution was to house the people in towers with large open spaces around them, which could retain the existing trees and be formed into gardens for pleasure or the production of food.

Dealing with the influence which modern materials should have in the towns, Mr. Emberton said traffic was one of our most urgent troubles, and something more drastic than roundabouts and one-way streets would have to be done if people a few years hence were to move at all. The first thing which would have to be removed was the sentimental attitude which insisted that buildings of doubtful antiquarian interest should be retained long after they had ceased to perform any useful function and stand in the way of economical development. Our cities should be considered as efficient workshops. The present method of widening streets by a few feet and restricting the height of buildings to 60 or 80 ft. would only delay the traffic crisis, perhaps for a generation, but not more. By then, aeroplane traffic would have to be considered, and the street would be out of date. The city of the future would be a city of towers, probably a quarter of a mile apart, in pleasant gardens, with plenty of room for all sorts of traffic and a tube station at the bottom of each tower. Vertical travel by means of lifts was obviously more efficient than horizontal travel, with present congestion.

Buildings, he concluded, should be designed as efficient machines rather than monuments to ourselves, and then perhaps we should evolve forms of beauty—related to our own times—such as had been achieved in other fields of construction, such as aeroplanes, ships and railway engines. Yet none of these things had been designed from an æsthetic point of view.

WEST YORKSHIRE ARCHITECTS

Mr. Norman Culley, F.R.I.B.A., in his presidential address to the West Yorkshire Society of Architects, held at Leeds on November 9, said that amidst our present-day civilization, with its complex of expression in architecture, well equipped was he who in his student days had learned the fundamental principles underlying all good expression in all styles and all methods of construction of the past.

The many new materials of architecture might quite properly give a nomenclature of synthetic architecture.

The full architectural development in materials in which colour was inherent had not been achieved. The psychological effect of colour was tremendous, particularly in the form of artificial illumination. One could almost anticipate an architecture of light and the ultimate realization of the psychological effect of colour in the flooding of our churches and chapels with a beautiful golden light immediately preceding and during the time of taking of collections.

Materials of inherent colour might reinforce the structural functioning. The admirable cry that form should follow function would appear to have been in many cases misinterpreted and resulted in manipulation of form, and not articulation of form. It would claim to be functional whilst its real category would be pseudo-functionalism, false to the very nomenclature claimed.

The whole dominant motive might be horizontal: man certainly moved in a horizontal direction, he was not naturally a climbing animal; but this was an age of machines, and machines could assist man's aspirations to movement in a vertical direction.

Architectural rhythm was not confined to a horizontal plane; but was expressed in a vertical plane also. One recollected two architectural design maxims of Professor Donaldson: (1) Unity without variety produced insipidity; (2) variety without unity produced confusion and distraction.

In rhythmic design the dominant motive might be horizontal or vertical, but whichever was dominant, the other would intensify and render satisfactory the desired effect.

Bereft of a superfluity of historical trappings, as it was, with the development of a system of just ornamentation for added virtue of grace, and as an aid to expression; with a rhythmic appreciation in design, one could see the "goose" of his last year's presidential address becoming the "swan" of this; a building achieving the requirements of beauty in elements which must be primarily structural.

Consideration of the subjectivity and objectivity of all art perception showed that it was the goose which had changed and not the swan.

Every true architect saw life as a matter of ideals in addition to bread and butter. It was Browning who wrote:

Man's aim must always exceed his grasp, else what's a Heaven for?

Of the competitions instituted by the society, open to its associate members, the following were the results:

Halden Prize (£4 4s.) for Essay: Mr. Fred Butterworth Walker, of Luddenfoot.

Measured Drawings and Sketches. Mr. Hubert Henry Castle, of Ackworth, Doncaster.

DEVON AND CORNWALL ARCHITECTS AT DINNER

Dr. Raymond Unwin, P.R.I.B.A., responding to the toast of the "R.I.B.A.," proposed by Mr. B. Priestley Shires, at the second annual dinner of the Devon and Cornwall Architectural Society, held at Plymouth, urged the desirability of preserving what was still preservable in that old part of Plymouth from which so many of our forefathers went forward to establish our reputation throughout the world.

The district, Dr. Unwin said, had done extremely well in regional planning, but one of the things that most

architects had to learn was to harmonize their buildings with the settings to which they belonged. They should be like jewels set in that wonderful silver and golden setting which Nature provided in Devon and Cornwall, with their wonderful amount of variety and beauty.

THE PHOTO-THEODOLITE

In the course of a paper on "Easements of Light," read before the Institution of Civil Engineers, on Thursday of last week, Mr. John Swarbrick, F.R.I.B.A., M.I.STRUCT.E., described his invention of a Daylight Factor Theodolite. Devised in order to obtain data for light-measuring calculating sheets, it consists, he said, of a theodolite stand, with the usual means of adjusting the level and reading the angle of azimuth.

Above the theodolite there is a camera, in place of the usual telescope of the transit theodolite. This camera can be rotated either in the horizontal or vertical planes, and it is so fixed that the centre of the iris of the lens or the nodal point of the lens is always in the centre of rotation. In this way, it is possible to obtain any number of photographs, showing the effect as the eye would see it from exactly the same point. By using a fixed focus, it has been possible to construct a series of angular grilles, corresponding to the various directions from which photographs have to be taken. By superimposing these grilles over the photographs, it is possible to ascertain with accuracy the exact extent and the position of the portion of the dome of the sky visible from the point in question.

It will be seen that, by taking photographs of a whole series of windows, in this way, from one point, it is possible to measure the exact amount of light that would be contributed by each of the windows to the point under consideration. A patent has been granted to me in respect of this instrument, which was found to be entirely novel and distinct in principle from any other invention.

It is practically impossible by means of a purely mathematical calculation to obtain the data required in an average easement of light case. Even the geometrical method, without the aid of photography, is a very long and troublesome business. The obstructing buildings are frequently at various angles, and the features upon them in a series of receding planes. This necessitates the preparation of a trigonometrical survey of the adjacent sites and the preparation of elevations and roof plans of the surrounding buildings. These have either to be obtained by measurement or by borrowing drawings from the architects or owners of the buildings in question. Sometimes the owners are unwilling to supply the data.

By means of the photo-theodolite, continued Mr. Swarbrick, I can now obtain as much information as I require, in the case of each view, in a matter of of a few seconds. The process of measuring all the points around the varying skylines by means of a transit theodolite is exceedingly tedious. Quite frequently dozens of points have to be dealt with on each floor. There are cases in which the expense incurred by proceeding in the old-fashioned way has been altogether out of proportion to the amount of the claim. By proceeding photographically it is possible to do a considerable part of the work at a fraction of the cost hitherto incurred.

Although the new instrument has not yet been long in use, it has already come to be employed extensively in cases in various parts of this country. My belief is that, in the future, the courts will prefer to utilize the photographic method of dealing with right of light cases to the fullest extent possible.

ST. PETER'S AND THE VATICAN

Sir Banister Fletcher, PP.R.I.B.A., lecturing at the Central School of Arts and Crafts on November 4, gave a vivid history of the building of St. Peter's Cathedral and the Vatican, illustrated by a splendid series of lantern slides.

Sir Banister, in his lecture on "Architecture of Venice," on Wednesday last, passed a number of encomiums on the great city of the Adriatic, which we Londoners, with certain necessary reservations, might with pardonable pride, appropriate to ourselves.

He said that, like Venice, our city was sea-born, and dependent for centuries on its sea traffic. But besides the sea we had the river, and if "water was the chief town-planner of Venice, and gave her the finest curved street in the world," the same might be said of the Thames as it swept round from Blackfriars Bridge to Westminster. We, too, had the finest street in the world. "Earth hath not anything to show more fair" was the poet's feeling as he crossed Westminster Bridge in the early morning. Venice introduced the horizontal lines suitable to a sea site; we had done the same in Somerset House and the County Hall, and were doing the same in a hundred other rising buildings. While the Doges "tore down buildings" to make a great piazza a fitting frame for the glowing picture of the façade of St. Mark's, we allowed our own St. Paul's, built on a far finer site than any Venice could show, to be confined within towering warehouses, which robbed it of much of its grandeur.

THE WORLD'S CEMENT PRODUCTION

Mr. Hal Gutteridge, A.M.I.MECH.E., lecturing on "The Manufacture of Portland Cement," at a meeting of the Institution of Structural Engineers, held on November 12, stated that in 1929 the total capacity of all cement plants in the United Kingdom was 6·75 million tons, with a production of 4·7 million tons, compared with the capacity of the United States plants of 43 million tons, and a production of 28 million tons. Canada, during the same year, had a capacity of 2·5 million tons, and produced 2 million tons.

Belgium exported the greatest quantity of cement of any country, amounting to 1·6 million tons, which was 58·3 per cent. of its total production, as compared with Germany with 1 million tons. Then, in descending order, came the United Kingdom (20 per cent. of total production), France, Denmark, the U.S.A., Canada, Sweden and Italy.

The U.S.A. imported the greatest quantity of cement of all countries, the United Kingdom being next. All countries had an excess of exports over imports of cement except the U.S.A., where there was an adverse balance of about a quarter of a million tons.

A STRUCTURAL STEEL FEDERATION

At a meeting of the steel structural industry it was unanimously decided to form a new organization called the National Federation of Bridge and Structural Engineers. Mr. James Halliday, of Messrs. Francis Morton & Co., Ltd., was elected the first chairman, and Mr. E. A. Willson, of Messrs. Archibald D. Dawnay and Sons, Ltd., vice-chairman.

The new federation has a wide field of work before it in the conditions affecting the supply and delivery of steelwork for all classes of public and private contracts. Its formation represents a keen desire on the part of this section of the steel industry to be ready to deal with every phase of economic policy with which the industry may be confronted. At the meeting a programme of work was decided upon and an executive committee, representing every district in England and Scotland, was elected.

The members of the Executive Committee are as follows: J. W. Baillie (The Horseley Bridge and Engineering Co., Ltd.), R. S. Benson (Head, Wrightson & Co., Ltd.), T. Booth (John Booth and Sons), A. J. Burgess (John Lysaght, Ltd.), H. B. Denton (Joseph Parkes and Son), J. R. Dixon (The Cleveland Bridge and Engineering Co., Ltd.), T. R. Miller (Motherwell Bridge and Engineering Co., Ltd.), A. Robson (Fairfield Shipbuilding and Engineering Co., Ltd.), J. D. Stitt (Redpath, Brown & Co., Ltd.), Grahame H. Thomson (P. and W. MacLellan, Ltd.), W. T. Thornhill (Rubery, Owen & Co., Ltd.), F. G. Woolley (Joseph Westwood & Co., Ltd.).

The secretary of the National Federation is Mr. C. J. Kavanagh, Artillery House, Artillery Row, S.W.1.

QUESTIONS THAT ARISE

Walling of Scottish Houses

"G. B." writes: "*Could your expert please inform me whether the following statement is correct:*

"'*The surface of an old Scottish house is not roughcast. The walls are built of rubble, and the successive coats of whitewash give a beautifully undulating surface which catches the light and sparkles with sunshine.*'

"*The above remarks are contained in a description by the architect, Mr. J. W. Laird, of Glasgow, of the house erected in Kelvin Hall, Glasgow, the winning design in* The Daily Mail *competition.*

"*The word 'harling' has been used in Scotland for generations, and is still used. I have always understood, after forty years' experience of the Scottish building trades, that this is an alternative for rough casting. I cannot imagine how anyone knowing Fyvie Castle in Aberdeenshire, part of which dates back to the eleventh or twelfth century (the Meldrum Tower), could make such a statement, and there are scores of old buildings in Scotland finished in the same manner, although in most of the older houses lime was used instead of cement.*"

The walling of Scottish houses of the sixteenth and the seventeenth centuries was generally built with rubble-stone and plenty of good lime mortar. Into the mortar filling, between the stones, on the outside and the inside faces of the wall, stone pinning and small chips of different sizes were firmly stuck, and the surfaces flushed with mortar; these operations were done, I believe, at the time of building. Such craftsmanlike work may still be found intact in a sheltered situation. That these rubble walls were not intended to be harled is clearly seen from the nature of the dressings, usually "picked" and finishing flush with the rubble wall-faces.

It appears that when in course of time the "pointing" required re-doing—probably early in the eighteenth century—the cheapest and readiest way was adopted, of covering the rubble surfaces, and very often all the dressings and corbelling also, with a uniform coating of "rough-cast," or "harl," as it is called in Scotland. To have picked out the mortar and the chips or "cocking," and to have done the work again as at first, would have been much too costly an operation. Anyhow, close-harled walling became the ordinary thing from early in the eighteenth century; a horrible variety, called "sneck-harling," came in fashion much later.

Rubble-built castles in the north-east of Scotland have been in the way of being harled—and reharled—for at least two centuries; but it is distinctly to be understood that the older castles, although now harled, were not meant to be so summarily (? ill) treated.

Limewash on outside rubble-walling of any date is practically unknown in the north-east of Scotland north of the Grampians—of old, "the Mounth." South of the Mounth, however, limewashing houses is common; but whether the practice goes back to the seventeenth century I do not know. Lime-washing *inside* walls was, of course, common everywhere. In this district, outside limewashing seems to be confined to coastguard stations and such buildings, and perhaps to some cottages in fishing villages. W. K.

Magnetic Variation

"Query" writes: "*Could you inform me as to the present variation of the true north point from magnetic? Some years ago I came across an easy method of making the calculation, but have lost the record. I believe a certain amount of deflection was allowed each year until a certain degree, either westerly or easterly, was reached, and then the amount of variation was reversed.*"

The magnetic variation, i.e. the angle between the true and magnetic north, is 11° 50′ W. in London in 1931—i.e. the magnetic needle is Wd. of the true north. The annual change is 13′ decreasing; this change is due to the magnetic poles of the earth changing their position with regard to the geographical poles. The condition of the variation of the world for 1927 can be seen on the Admiralty Chart No. 2598 (obtainable from H.M. Stationery Office). R.

Suspended Concrete Floor

"Grano" writes: "*I am building a rather large suspended concrete floor with light joists at 18-in. intervals encased in 6 ins. of concrete. It is to be finished in granolithic paving 1 in. thick. I am now wondering whether it is necessary to make expansion joints to prevent cracking of the topping. If your expert thinks expansion joints are necessary, at what intervals should they be used and of what material?*"

It will certainly be advisable to provide expansion joints, to allow for cracks which will inevitably arise in any granolithic floor laid in such circumstances. Generally, the floor panels should not exceed 6 ft. square, and if the first to be laid are set out checker-fashion between 1-in. fillets secured to the concrete, which serve as guides to the rule, and, when the squares are set and the guides removed, strips of tarred paper are set against the free edges and the intervening checkers are filled in, that gives a practically successful result. Brass strips are sometimes used, or lines of paving tiles or tesseræ, by which a structural necessity may be converted into a legitimate decorative device.

It is preferable to get granolithic flooring laid by a specialist firm, which is generally an economy in the long run. E. G.

LAW REPORTS

ARCHITECT'S CLAIM FOR FEES

Poley v. *Fey. King's Bench Division. Before Mr. Justice Hawke*

THIS was an action by Mr. Edwin W. Poley, of Geraldine Road, Chiswick, against Mr. Albert Bennett Fey, of Stamford Hill, to recover the sum of £1,824 odd, fees alleged to be due on the erection of two blocks of flats in the North Circular Road, Golder's Green.

Mr. Batt, counsel for the plaintiff, stated that his client prepared the plans in 1929 and the flats were erected, but plaintiff had only been paid £20. Plaintiff's fees were in accordance with the usual scale. Defendant now alleged that the plans were rejected by the local authority.

Giving evidence, the plaintiff said the flats were erected in accordance with his plans, with one slight variation. The plans represented a month's work, and his charges were on the R.I.B.A. scale. The cube cost of the buildings was £47,700.

Cross-examined, plaintiff denied that he agreed that if the plans were rejected by the local authority he would not be paid.

Were not your plans rejected?—No, they were used.

Mr. Albert E. Poley, an architect and son of the plaintiff, said he was employed to supervise the work, and the plans used were prepared by the plaintiff. The building cost £25,000.

Mr. Thomas, counsel for the defendant, said the plans finally approved by the local authority bore the name of another architect who was now making a claim on the defendant.

The defendant gave evidence, and said the contract price for the building was £23,500, and he understood that the proper charge by the architect was 4 per cent. on that sum. He understood that the plaintiff's plans were rejected.

After further evidence, Mr. Thomas said that the point was whether plaintiff was entitled to 4 per cent. on the estimated cost of the building or the contract price. He said he was prepared to admit that there was no substantial difference between plaintiff's plans and those actually used. His contention was that the plaintiff's claim should be reduced to cover the cost of altering his plans, which was necessary because of his omission to make them comply with the Town

Planning Scheme in operation in the district.

His lordship, after hearing the arguments, gave judgment for the plaintiff for £1,400 with costs.

LIABILITY OF LANDLORD

Cooper v. *Double. King's Bench Division. Before Mr. Justice Macnaghten and a Common Jury*

This action raised important points in regard to the liability of landlords in the matter of injury to a tenant due to alleged negligence of the landlord to keep the premises reasonably fit for habitation within the meaning of the Housing Acts.

Mr. Martin O'Connor appeared for the plaintiff, and said his client was Mr. Geo. William Cooper, a plater, and he resided at 27 Latchmere Road, Battersea, and he sought to recover from the defendant, Mr. Double, his landlord, damages for personal injuries sustained through the alleged negligence to keep the premises in a proper state of repair. His client occupied the basement flat in the house, paying 7s. 6d. per week. Plaintiff's case was that, on February 8, 1930, whilst walking in the passage leading from his front room to the back of the flat, a floor board in the passage, on which he stepped, tipped up and collapsed, with the result that he was thrown down and, falling against a bicycle, sustained injuries which included the loss of sight of the right eye.

Counsel's contention was that the accident was caused by the negligence of the defendant to keep the premises in a reasonable state of repair. Water had percolated through the passage, with the result that the joists were rotten. He further submitted that defendant had committed a breach of his statutory duty under the Housing Acts.

Plaintiff gave evidence and declared that he had given notice of the need of repair to the premises.

Evidence was also given to the effect that the joists supporting the floor boards were rotten.

Mr. Eastham, K.C., appeared for the defendant, and denied that the defendant had been guilty of any breach of agreement, or breach of any statutory duty or any negligence. Plaintiff, he submitted, had proved no liability on the defendant at all. The accident was not caused by a defective floor board at all, but he suggested that it was due to the plaintiff going along the passage in the dark and, slipping, falling against the bicycle. His case was that no notice had been given the defendant as to the need of repairs.

For the defence, evidence was given by Mr. E. Thompson, builder, of South Norwood, that the passage was repaired in March, 1928, when new floor boards were put in, and by Mr. J. J. Burgess, a Battersea Borough Council inspector, who said that he had received no notice of any defects in the floor boards and that he had seen nothing the matter with them prior to the accident. The inspector added that he had seen the floor boards since and found that one had not been properly nailed to the joist.

The rent collector for the agents of the defendant stated neither plaintiff nor his wife had ever complained about the floor boards prior to the accident.

The jury returned a verdict for the plaintiff, and assessed the damages at £614.

His lordship entered judgment accordingly and granted a stay of execution pending an appeal on terms, on the application of Mr. Eastham.

COMPETITIONS OPEN

November 23.—Sending-in day. New Junior and Infants' School, Farnborough Road, Birkdale, for the Southport Corporation. Limited to architects practising or residing in the County of Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £100, £75 and £50. Conditions were obtainable from the Director of Education, 1 Eastbank Street, Southport. (Deposit £1 1s.)

November 24.—Sending-in day. New School on a site at the corner of Hill Lane and Bellemoor Road, Southampton, for the Governors of the Girls' Grammar School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions were obtainable from F. L. Freeman, M.A., Secretary to the Education Committee, St. Mary's Road, Southampton. (Deposit £1 1s.)

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions, etc., obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, NOVEMBER 18

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The R.S.A. Competition of Industrial Designs, 1931." By P. H. Jowett, A.R.C.A. Chairman: Arthur J. Davis, F.R.I.B.A. **8 p.m.**

ILLUMINATING ENGINEERING SOCIETY. At 4 Dowgate Hill, E.C.4. Addresses on "The Tallow Chandlers' Company and their Craft," by R. H. Monier-Williams; "The Historical Development of Gas Lighting," by W. J. Butterfield, M.A.; and "The Early Days of Electric Lighting," by J. Swinburne. **7 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Address by E. H. Ely, B.Sc. **6.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Later Renaissance in Italy." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

LONDON SOCIETY. Visit to the Pre-Fire Church of St. Andrew Undershaft, corner of Leadenhall Street and St. Mary Axe, E.C.3. **2.30 p.m.**

THURSDAY, NOVEMBER 19

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the School of Art, Haywra Crescent, Harrogate. "Architecture and Decoration." By Howard Robertson, F.R.I.B.A. **7 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Evolution of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Temple Tomb of the House of Minos and the Private Chapel of its High Priests." By Sir Arthur Evans. **8 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Decoration the Background for Furniture." By C. A. Hindley. **7.30 p.m.**

FRIDAY, NOVEMBER 20

INCORPORATED INSTITUTE OF BRITISH DECORATORS. At the School of Art, Aberdeen. "Lettering and Scriptwriting." By Principal Fraser.

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. Presidential address by Dr. R. C. Maxwell, O.B.E. **6 p.m.**

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Discussion on "New Houses for Old." The new all-British Housing Film will also be shown and described by Miss A. M. Lipton and Miss K. England. Chairman: The Rt. Hon. Lord Balfour of Burleigh. **5 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Evolution of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, NOVEMBER 21

Sunrise, 7.26 a.m. Sunset, 4.5 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Fourth of five non-technical lectures on Present-Day Architecture. "Places for Recreation." By J. Murray Easton, F.R.I.B.A. **3 p.m.**

LONDON SOCIETY. Visit to Fulham Palace. **2.30 p.m.**

MONDAY, NOVEMBER 23

LONDON SOCIETY. Visit to the works of Chappell & Co., Ltd., 19 Ferdinand Street, Chalk Farm Road, N.W.1. **2.30 p.m.**

TUESDAY, NOVEMBER 24

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. London and Home Counties Branch. At 1 Wilbraham Place, S.W.1. "Housing Legislation and the Housing Problem." By Leslie Maddock. **7 p.m.**

WEDNESDAY, NOVEMBER 25

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "A Comparative Analysis of French and Italian Renaissance." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "French Architecture." By J. De la Courcelle. **6 p.m.**

THURSDAY, NOVEMBER 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Carving as a Method of Enriching Furniture." By H. P. Shapland, A.R.I.B.A. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate, "Glories of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, NOVEMBER 27

NATIONAL HOUSING AND TOWN PLANNING CONFERENCE. At Blackpool. Until Monday, November 30.

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Glories of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

MONDAY, NOVEMBER 30

R.I.B.A., 9 Conduit Street, W.1. "Street Architecture." By Howard Robertson, F.R.I.B.A. Also presentation of London Architecture Medal, 1930. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Second of six lectures on "The History of Architecture—XIIIth Century." By Herbert Mansford. **7.30 p.m.**

TUESDAY, DECEMBER 1

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "The Artist in Relation to Industry, with particular reference to Decoration." By H. H. Holden.

TRADE NOTES

The new Britco mass-production door factory of the Merchant Trading Co., Ltd., reference to which has been made from time to time in THE ARCHITECTS' JOURNAL, is now operating one full shift. The firm hope, however, shortly to commence two shifts, or alternatively to carry out their original idea of single unit plants at Bristol and London, for which they have already laid all plans. Some six years ago the firm took in hand the marketing of Celotex, and it is generally conceded throughout the country that owing to their persistent efforts they have been most successful in the handling and distribution of this product. In conformity with the policy of marketing English made and Empire products they have taken a further step. As the agreement with the Celotex Co. expired on November 11, they have decided to discontinue marketing this product. Instead, the firm have consummated arrangements with the Anglo-Colonial Trading Corporation, Ltd., an associated company of Messrs. Balfour, Williamson & Co., whereby the Merchant Trading Co., Ltd., are to represent as sole importers and wholesale distributors throughout England, Scotland, Wales, Northern Ireland, the Irish Free State, and for certain other territories, the Insulation Wallboard "Donnacona," which is a product of Messrs. Price Bros. & Co., Ltd., of Quebec, Canada. Arrangements have also been completed for the transference of several members of the staff of the Anglo-Colonial Trading Corporation, Ltd., to the Merchant Trading Co., Ltd. Mr. Cory, the general manager of the former company, joined the Merchant Trading Co., on November 15, as sales manager for the product.

*

Messrs. D. G. Somerville & Co., Ltd., of 35 Grosvenor Place, S.W.1, have recently produced a new artificial precast stone, marketed under the trade name of Durus. This new building material is, it is claimed, obtainable in finishes similar to most natural stones now in use, and can be moulded and cast to practically any requirements. For facing purposes, it is stated, Durus has special advantages, whether from the point of view of economising over natural stone or adding the finishing touches to an otherwise unattractive building. It is manufactured at D. G. Somerville's own works at New Cross. Among the contracts for artificial stone now in hand by the firm are the following: The Royal Institute of Public Health (Gunton and Gunton, Architects), the Willesden Education Committee, and also the supply of kiosks for the Postmaster General and the Receiver of the Metropolitan Police.

This girder, 68 ft. long, 10 ft. 4 in. deep, by 2 ft. 4 in. wide, weighing 98 tons, will carry 9 upper floors at the Cumberland Palace Hotel, Marble Arch, London. It was constructed by Messrs. Dorman Long & Co., Ltd., and transported in one piece from Middlesbrough to the site. The rivets alone weigh 2½ tons.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Thames House, Westminster, S.W.1 (pages 666–671). General contractors, John Mowlem & Co., Ltd., who were also responsible for the floor construction and private roads and sewers. Sub-contractors: Dorman, Long & Co., Ltd., steelwork; United Stone Firms (1926), Ltd., Portland stone; A. and F. Manuelle, Ltd., granite; Waygood Otis, Ltd., lifts and external goods lifts doors; C. Isler & Co., Ltd., wells; Greenway and Ludlow, Ltd., marble (including porch flooring and treads and risers), and marble skirtings and pavings to National Provincial Bank; British Vacuum Cleaner and Engineering Co., Ltd., vacuum cleaning; Richard Crittall & Co., Ltd., heating and hot and cold water services and ventilation and hopper cheeks to rubbish chutes; French Asphalte Co., Ltd., asphalt; W. J. Furse & Co. (London) Ltd., lightning conductors; Stourbridge Glazed Brick and Fire Clay Co., Ltd., enamel plate covers to access doors under lavatory basins, supports for tubular scaffolding in faience roofing, access boxes to drinking fountains, wall tiling (supply only), faience to bridge soffit and roof, and drainage chutes to lavatory basins; Carter & Co. (London), Ltd., lavatory floor tiling (supply and fixing), wall tiling (fixing only), and mirrors; T. Clarke & Co., Ltd., electrical; Matthew Hall & Co., Ltd., plumbing; Shanks & Co., Ltd., sanitary fittings (supply); Haywards, Ltd., pavement and lantern lights, casements behind external grilles, cellar and coal flaps, bronze folding arms, hatchways to flagstaffs; Henry Hope and Sons, Ltd., glazed lanterns over areas, metal windows and postal chutes; John Mowlem & Co., Ltd., and H. King and Sons, Ltd., joinery; J. P. White and Sons, Ltd., joinery (flush veneer doors); General Constructional and Engineering Co., Ltd., iron railings surrounding flat roofs; Henry Hope and Sons, Ltd., and James Gibbons, Ltd., door furniture; F. De Jong & Co., Ltd., fibrous plaster cornices and barrel ceiling on seventh floor, and fibrous plaster ceilings to corridors; A. D. Young, Ltd., solid plaster, and screeding to floors and roofs; G. Jackson and Sons, Ltd., fibrous plaster and solid plaster work to staircases; John Mowlem & Co., Ltd., and Imperial Chemical Industries, Ltd., floor hardener; J. Starkie Gardner & Co., Ltd., and the Bromsgrove Guild, Ltd., grilles and balustrading; Bromsgrove Guild, Ltd., external bronze entrance doors, wrought-iron balconies, letter-boxes and bell-pushes; J. and E. Hall, Ltd., cooling; Macinlop, Ltd., rubber flooring to staircases and corridors; Lighting Trades, Ltd., electric light fittings; Expanded Metal Co., Ltd., false ceilings in lavatories; James Gibbons, Ltd., locks; J. Chater and Sons, Ltd., fire-resisting glazing to doors; Roberts, Adlard & Co., Ltd., slating; Mather and Platt, Ltd., water-storage tanks (sub-basement and roof level); J. Starkie Gardner & Co., Ltd., wrought-iron lay-lights on seventh-floor staircase halls and balustrading to bank staircases; Birmingham Guild, Ltd., lead bases to flagstaffs; J. Hall and Sons, Ltd., special glazing to bank; Marshall, Sons & Co., Ltd., coal-bunker doors; H. King and Son, Ltd., joinery to National Provincial Bank; John Tann, Ltd., strong-room ventilators; Chubb and Sons' Lock and Safe Co., Ltd., strong-room shelving; James Gibbons, Ltd., toilet fittings.

Bank of Scotland, 235 Sauchiehall Street, Glasgow (pages 674–675). P. and W. Anderson (Glasgow), Ltd., mason work; P. and W. Maclellan, Ltd., steelwork; Wm. Lightbody, general joinery work; John Cochrane, bank finishings; F. Braby & Co., Ltd., bronze and steel windows; Charles Henshaw, decorative bronze work; William Forbes and Sons, plaster work; Hugh Twaddle and Son, Ltd., plumber and heating; Allan, Arthur, and Ure, Ltd., electric light.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Surrey C.C. is to purchase premises in Whyteleafe Road, CATERHAM, for conversion into a children's home.

The Surrey Education Committee has obtained sanction for a loan of £44,000 for the erection of a secondary school at COULSDON.

Mr. A. Burtenshaw is to erect shops, flats and garages in Green Lane, ELTHAM.

Plans passed by the ILFORD Corporation: Fifty-four houses, Queensborough Gardens, nine houses, Parkham Drive, and eight shops, Redbridge Parade, for Mr. T. Anders; twenty-one houses, Looe Gardens, and two houses, Falmouth Gardens, for Mr. G. F. Seigerts; twenty houses, Gordon Road, for Mr. E. Linnsen; ten houses, Canterbury Avenue, for Mr. A. P. Griggs; four houses, Roxy Avenue, for Mr. F. Stimson; six houses, Middleton Gardens, twenty houses, Brockham Drive, shop, Aldborough Parade, and seventy-six houses, Ramsgill Drive, for Mr. J. Aldridge; seven houses, Eltisley Road, for Mr. W. L. Thompson; nine houses, Mayesford Road, for Messrs. P. G. Ashton and Sons; two shops, Eastern Avenue, for Seymour Construction Co., Ltd.; alterations, 191 High Road, for Mr. J. W. Lohden; sixteen houses, Fernhall Drive, for Mr. L. A. Warner; eight houses, Barley Lane, for Mr. F. Stimson; alterations, 192–8 High Road, for Mr. W. J. Lewis; two houses, Buntingbridge Road, for Mr. W. G. Faircloth; alterations, 175 High Road, for Messrs. Freeman, Hardy and Willis, Ltd.; four houses, Shella Gardens, for Mr. R. Taylor; garage extensions, Longridge Road, for L.G.O.C.; two houses, Loudoun Avenue, for Mr. W. M. Edwards.

The Middlesex Education Committee is to purchase land on the Springfield estate, KINGSBURY, for the erection of an elementary school.

The L.C.C. Town Planning Committee has sanctioned a proposal for the erection of a cinema at the junction of High Street and Wickham Lane, PLUMSTEAD.

The WESTMINSTER City Council has approved plans by Messrs. Grace and Farmer, showing the proposed frontage lines in Water Street, in connection with new buildings for Victoria Embankment Properties, Ltd.

The L.C.C. is acquiring a site on the Middle Park estate, WOOLWICH, for the erection of an elementary school.

SOUTHERN COUNTIES

Plans passed by the DARTFORD U.D.C.: Cold stores, 12 Market Street, for Mr. W. F. Blay; buildings, Temple Hill, for Messrs. Burroughs, Welcome & Co.; eighteen houses, The Brent, for Mr. W. F. Summers.

About 950 houses are to be erected on the Falconwood Park estate, WELLING, Kent.

EASTERN COUNTIES

The Herts C.C. has received plans from Mr. J. M. Sheppard, A.R.I.B.A., for extension at the BISHOP'S STORTFORD institution, at a cost of £36,000, but has asked him to revise the plans in order to effect economies.

The Herts Education Committee has purchased a site on the Sandon Bury Farm estate, near BUNTINGFORD, for the erection of an elementary school.

The Herts Education Committee has purchased land in Coldharbour Lane, BUSHEY, for the erection of an elementary school.

Mr. J. Gowers is to develop the Kingston estate, CHELMSFORD.

Plans passed by the CHELMSFORD Corporation: Shop and house, Writtle Road, for Mr. G. A. Hart; seven houses, Bishop Road, for Mr. A. Holmes; additions, 4 Springfield Road, for Messrs. Collins and Sons; ten houses, St. John's Road, for Mr. W. J. Aldred; four houses, Galleywood Road, for the Real Construction Co.

The CHELMSFORD Corporation Housing Committee recommends acquiring fourteen acres of land, adjoining Waterhouse Lane, for housing purposes.

The Herts Education Committee is purchasing land at Littlegrove, EAST BARNET VALLEY, for the erection of a senior school.

The Herts Education Committee is obtaining a site in Common Lane, WELWYN GARDEN CITY, for the erection of a grammar school.

SOUTH-WESTERN COUNTIES

Plans passed at CHELTENHAM: Two houses, Russell's Piece, Boddington, for Mr. E. Strawford; two houses, Withy Firm, Bishops Cleeve, for Mrs. E. Togwell; house, Painswick Road, for Mr. S. G. Morris; houses, off Naunton Lane, for Naunton Estates, Ltd.

Mr. E. Green is to develop the Upton Leigh estate, Teignmouth Road, TORQUAY.

Plans passed by the TORQUAY Corporation: Two houses, Cadewell Lane, for Mr. E. Bowden; thirteen houses, Chatto Road, for Messrs. J. Lloyd and Sons; two houses, Fore Street, Barton, for Mr. R. Kellow; eight houses, Reeves Road, Chelston, for Mr. P. D. Cavanna; house, Homestead Road, for Mr. J. Lloyd; additions, Livermead House Hotel, Torbay Road, for Livermead Hotel, Ltd.

MIDLAND COUNTIES

Plans passed by the CHESTERFIELD Corporation: House, Morris Avenue, for Mr. A. Needham; two houses, Springfield Avenue, for Miners' Welfare Society; additions, "Rising Sun" public-house, High Street, New Whittington, for Scarsdale Brewery Co., Ltd.; house, Newbold Road, for Mr. G. Howe; alterations to stores, Sheffield Road, for Chesterfield Co-operative Society; two houses, Rhodes Avenue, for Mr. L. Crossley.

Plans passed by the DUDLEY Corporation: House, New Rowley Road, for Mr. W. Cooper; four houses, New Rowley Road, for Mr. C. P. Blewitt; two houses, Tinsley Hill Road, for Mr. W. Lindley; shops, Birmingham Road, for Messrs. S. C. Lloyd, Ltd.; shop, Priory estate, for Dudley Co-operative Society, Ltd.; house, Oakham Road, for Mr. A. R. Round; two shops, Darby Road, Netherton, for Mr. Joseph Read.

Plans passed by the MANSFIELD Corporation: Two houses, Beardall Street, for Messrs. C. G. Percival and Sons; two houses, Sutton Road, for Mr. C. C. Stafford; additions to club, West Hill Drive, for the Mansfield Labour Committee; two houses, Cock Lane, for Mr. J. Beckett; two houses, Berry Hill Road, for Messrs. Blythe and Sons; four bungalows, Southwell Road, for Mr. F. Fowler; pump-house, Pleaseley, for Mr. C. Brown.

The OXFORD Corporation has approved plans for the layout of an extension of the estate of Messrs. N. Moss and Sons, Ltd., at Between Towns Road, Cowley.

Plans passed by the OXFORD Corporation: Additions, Conservative Club, New Road, for Club Committee; two houses, Great Headley estate, for Mr. A. C. Carter; two houses, Highfield Avenue estate, for Messrs. Ponting & Co.; two houses, Botley Road, for Mr. D. Mealing; twenty-two houses, Sunnyside estate, for Messrs. R. Gardner and Sons; four houses, Iffley Road, for Mr. G. Simmons; extensions, Taylor Institute, St. Giles', for curators; eighty-six houses, Cowley estate, for Messrs. N. Moss and Son, Ltd.; additions, "Turk's Head" public-house, High Street, for Mrs. J. Davies; two houses, Hamilton Road, for Mr. H. Collier; ten houses, Marshal Road, for Messrs. R. Gardner and Son; village hall, Godstow Road, for Wolvercote Hall Committee; new wards, Radcliffe Infirmary, Woodstock Road, for the governors.

The WALSALL Corporation is to erect a further 100 houses on the Field Road estate.

NORTHERN COUNTIES

The Gardens Estate Co., Ltd., is to develop an estate at EAGLESCLIFFE, county Durham.

The HULL Corporation is to obtain land for the extension of the Pickering almshouses.

Plans passed by the HULL Corporation: Box-making workshop, Lorraine Street, for Mr. C. Overton; flats for aged poor, Marfleet Lane, for Sutton Dwellings Trust; shop, Marfleet Lane, for Messrs. Curzon Bros.; two houses, Willerby Road, for Messrs. Moore and Arundel; four houses, Swanland Road, for Mr. J. Alma Jordan; two houses, North Drive, for Messrs. J. Kirby and Son; four houses, Spring Gardens, for Mr. G. A. Shepherdson; two houses, Kirkella, for Mr. Henry Smith; two shops, Endyke Lane, for Mr. J. W. Jordan; club, Endyke Lane, for Mr. J. Beasty; eight shops, Endyke Lane, for Messrs. Trigg and Barnett; eight shops, Beverley High Road, for Mr. G. Overton; eight houses, National Avenue, for Messrs. Mellor and Naylor.

Plans passed by the MANCHESTER Corporation: Church and Sunday school, Moseley Road, Rusholme; revised plans, Capitol cinema, School Lane, Didsbury; alterations and additions, State cinema, Raby Street, Moss Side; church for First Church of Christ Scientist, Moseley Road, Levenshulme.

The United Automobile Services, Ltd., is to extend its bus depot in Park Street, RIPON.

The ROTHWELL (YORKS) U.D.C. is seeking sanction for a loan of £18,650 for the erection of public baths.

The Durham County Education Committee has decided to erect a new school for 480 scholars at Woodside, RYTON, by direct labour, at an estimated cost of £16,758.

Plans passed by the SHIPLEY U.D.C.: Four houses, Ivy Road, for Mr. W. Smith; two shops and houses, Wrose Road, for Messrs. A. and F. Mellor; ten bungalows, off Westfield Lane, for Messrs. Ratcliffe Bros. and Cooper.

The STOCKTON-ON-TEES Education Committee is to erect an elementary school for 1,000 pupils near High Street.

Plans passed by the STRETFORD U.D.C.: Four shops and houses, Skerton Road, for Mr. H. G. Russell; shop extensions, Edge Lane, for Mr. H. Collins; factory, Mellors Road, for Mr. J. Stephenson.

The WARRINGTON Corporation has obtained sanction for a loan of £80,500 for the erection of 216 houses on the Lousher estate.

The WARRINGTON Corporation is to erect thirty-two houses in Westy Lane, for persons to be displaced by slum clearances.

The WARRINGTON R.D.C. is to erect twenty-six houses for rural workers in various parishes.

The WARRINGTON Education Committee proposes to proceed with the erection of the Fairclough school, at a cost of £47,887.

The WARRINGTON Corporation has sanctioned plans prepared by Mr. S. A. Mackay, architect, for the new joint showrooms for the gas and electricity departments in Buttermarket Street.

Plans passed by the WARRINGTON Corporation: Twelve houses, Connaught Avenue, for Mr. George Cooper; assembly hall, St. Augustine's Avenue, for Rev. J. L. Cullen; alterations, Factory Lane, for Messrs. J. Crossfield and Sons, Ltd.

The Durham County Education Committee has obtained a site at WILLINGTON for the erection of an elementary school.

The YORK Education Committee has prepared plans for extensions at Mill Mount secondary school.

SCOTLAND

The GLASGOW Education Committee has acquired a site in Anworth Street, Tollcross, for the erection of a Catholic school.

The GLASGOW Corporation is considering a scheme for the erection of houses on the Blackhill golf course.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¼
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6¼	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_3	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6¼	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kiddermin-ster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Lough-borough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLES-FIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middles-brough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	Southampton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Welling-borough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 3
¾" Crushed Ballast . . . . . ,,	9 6
Building Sand . . . . . ,,	10 0
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	1 —
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . . . ,,	9 18 0
,, Wirecuts . . . . . ,,	8 16 0
,, Brindles . . . . . ,,	8 0 0
,, Bullnose . . . . . ,,	10 8 0
Red Sand-faced Facings . . . . . ,,	7 11 0
Red Rubbers for Arches . . . . . ,,	15 0 0
Multicoloured Facings . . . . . ,,	9 4 0
Luton Facings . . . . . ,,	8 16 0
Midhurst White Facings . . . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . . . ,,	30 0 0
Double Headers . . . . . ,,	27 0 0
Glazed Second Quality, *Less* . . . ,,	1 0 0
,, Buffs and Creams, Add . . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . . ,,	2 0
3" ,, ,, ,, . . . ,,	2 3
4" ,, ,, ,, . . . ,,	3 0

MASON

The following d/d F.O.R at Nine Elms :	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, ¾" . . . ,,	17 6
,, 1" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1¼" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"	⅜"	½"	¾"	1"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6	
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6	
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –	
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –	
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –	
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –	

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts :

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	. 50
Water . . . 58½	,, water	. 45
Steam . . . 55	,, steam	. 40

FITTINGS.

Per cent.		Per cent.
Gas . . . 57½	Galvanized gas	. 47½
Water . . . 52½	,, water	. 42½
Steam . . . 47½	,, steam	. 37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . ,,	10 0
,, ,, ⅞" . . ,,	9 9
,, ,, 1" . . ,,	9 6
,, ,, 1⅛" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1⅜" . . ,,	9 0
,, ,, 1½" . . ,,	9 0
,, ,, 1¾" . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

	4" s. d.	6" s. d.
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 ft. . ,,	7½ to 1	1 0
,, ,, 2 . . ,,	10 ,, 1	3½
,, ,, 3 . . ,,	1 4½ ,, 1	10
,, ,, 4 . . ,,	1 11 ,, 2	4
,, ,, 6 . . ,,	2 3 ,, 2	7½
,, ,, 8 . . ,,	2 5 ,, 3	0½
,, ,, 12 . . ,,	2 10 ,, 3	3½
,, ,, 20 . . ,,	3 3½ ,, 3	9
,, ,, 45 . . ,,	3 6½ ,, 4	0½
,, ,, 65 . . ,,	3 11½ ,, 4	4
,, ,, 90 . . ,,	4 4 ,, 4	9
,, ,, 100 . . ,,	4 6 ,, 4	11
Vita glass, sheet, n/e 1 . . ,,		1 6
,, ,, 2 . . ,,		1 3
,, ,, over 2 . . ,,		1 9
,, ,, plate, n/e 1 ft. . ,,		1 6
,, ,, ,, 2 . . ,,		3 0
,, ,, ,, 5 . . ,,		4 0
,, ,, ,, 7 . . ,,		5 0
,, ,, ,, 15 . . ,,		6 0
,, ,, ,, over 15 . . ,,		7 6
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	2 4
Boiled oil . . . . ,,	2 8
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay add	,,	3 0
If in underpinning ,,	,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar	Per Rod 32 0 0
,, ,, in cement	,, 34 0 0
,, Stocks in cement	,, 41 10 0
,, Blues in cement	,, 62 0 0
Extra only for circular on plan	,, 3 0 0
,, backing to masonry	,, 2 0 0
,, raising on old walls	,, 3 0 0
,, underpinning	,, 10 0 0
Fair Face and pointing internally	F.S. 3
Extra only for picked stock facings	,, 1 0
,, red brick facings	,, 1 6
,, blue brick facings	,, 1 9
,, glazed brick facings	,, 4 6
Tuck pointing	,, 10
Weather pointing	,, 4
Slate dampcourse	,, 1 0
Vertical dampcourse	,, 1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse	Y.S. 5 6
½″ Vertical dampcourse	,, 7 6
½″ paving or flat	,, 5 6
1″ paving or flat	,, 6 6
1″ × 6″ skirting	F.R. 1 0
Angle fillet	,, 2
Rounded angle	,, 2
Cesspools	Each 5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C. 1 1 6
Bath stone and do., all as last	,, 15 6
Artificial stone and do.	,, 16 6
York stone templates, fixed complete	,, 14 0
,, thresholds	,, 16 0
,, sills	,, 1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr. 4 5 0
Do., 18″ × 9″	,, 4 2 0
Do., 24″ × 12″	,, 4 12 0
Westmorland slating, laid with diminished courses	,, 6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,, 4 0 0
Do., all as last, but of machine-made tiles	,, 3 11 0
Fixing only, lead soakers	Doz. 9
Stripping old slating and clearing away	Sqr. 10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr. 2 12 0
Shuttering to sides and soffits of beams	F.S. 1 0
,, to stanchions	,, 1 0
,, to staircases	,, 2 0
Fir and fixing in wall plates, lintols, etc.	F.C. 5 0
Fir framed in floors	,, 6 9
,, ,, roofs	,, 8 3
,, ,, trusses	,, 9 0
,, ,, partitions	,, 12 0
½″ deal sawn boarding and fixing to joists	Sqr. 1 17 6
1″ ,, ,, ,, ,,	,, 2 1 6
1½″ ,, ,, ,, ,,	,, 2 7 6
1½″ × 2″ fir battening for Countess slating	,, 12 6
Do. for 4″ gauge tiling	,, 16 0
Stout feather-edged tilting fillet	F.R. 6
Patent roofing felt, 1 ply	Y.S. 2 6
,, ,, ,, 2 ,,	,, 3 0
,, ,, ,, 3 ,,	,, 3 6
Stout herringbone strutting to 9″ joists	F.R. 1 0
1″ deal gutter boards and bearers	F.S. 1 4
1½″ ,, ,, ,, ,,	,, 1 8
2″ deal wrought rounded roll	F.R. 9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr. 2 15 0
½″ do.	,, 3 4 0
⅝″ do.	,, 3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S. 1 10
1½″ do.	,, 2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½″ deal moulded sashes of average size	F.S. 2 3
2″ ,, ,, ,, ,,	,, 2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,, 4 3
2″ ,, ,, ,, ,,	,, 4 6
Extra only for moulded horns	Each 9
1½″ deal four-panel square, both sides, door	F.S. 2 6
2″ ,, ,, ,, ,,	,, 3 0
1¼″ ,, but moulded both sides	,, 3 0
2″ ,, ,, ,, ,,	,, 3 6
4″ × 3″ deal, rebated and moulded frames	F.R 1 6
4½″ × 3½″ ,, ,, ,,	,, 2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S. 2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,, 3 0
1½″ deal moulded wall strings	,, 2 6
1½″ ,, outer strings	,, 2 9
Ends of treads and risers housed to string	Each 2 0
3″ × 2″ deal moulded handrail	F.R. 1 6
1″ × 1″ deal balusters and housing each end	Each 2 6
1½″ × 1½″ ,, ,,	,, 3 3
3″ × 3″ deal wrought framed newels	F.R. 1 6
Extra only for newel caps	Each 7 6
Do., pendants	,, 7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt. 17 0
Riveted plate or compound girders, and hoisting and fixing in position	,, 1 3 0
Do. stanchions with riveted caps and bases and do.	,, 1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,, 1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S. 1 0
Wrot-iron caulked and cambered chimney bars	Per cwt. 1 15 0

PLUMBER

		½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
Milled lead and labour in flats, gutters	Per cwt.						1 18 0
Do. in flashings	,,						2 0 6
Do. in covering to turrets, etc.	,,						2 7 6
Do. in soakers	,,						1 13 6
Labour to welted edge	F.R.						3½
Open copper nailing	,,						3½
Close ,,	,,						4½
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—
4″ cast-iron ½-rd. gutter and fixing	F.R.						1 3
Extra, only stop ends	Each						1 0
Do. angles	,,						1 6
Do. outlets	,,						3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.						1 6
Extra, only for shoes	Each						2 6
Do. for plain heads	,,						5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh	Y.S. 3 9
Do. in n/w to beams, stanchions, etc.	,, 5 6
Lathing with sawn laths to ceilings	,, 1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,, 2 6
Do. vertical	,, 2 9
Rough render on walls	,, 2 3
Render, float and set in lime and hair	,, 3 0
Render and set in Sirapite	,, 3 3
Render, backing in cement and sand, and set in Keene's cement	,, 4 6
Extra, only if on lathing	,, 9
Keene's cement, angle and arris	F.R. 8
Arris	,, 3
Rounded angle, small	,, 3
Plain cornices in plaster, including dubbing out, per 1″ girth	,, 2
1″ granolithic pavings	Y.S. 5 0
1½″ ,,	,, 6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,, 1 2 6
9″ × 3″ ,, ,, ,, ,,	,, 1 7 0
Extra, only for small quadrant angle	F.R. 9

GLAZIER

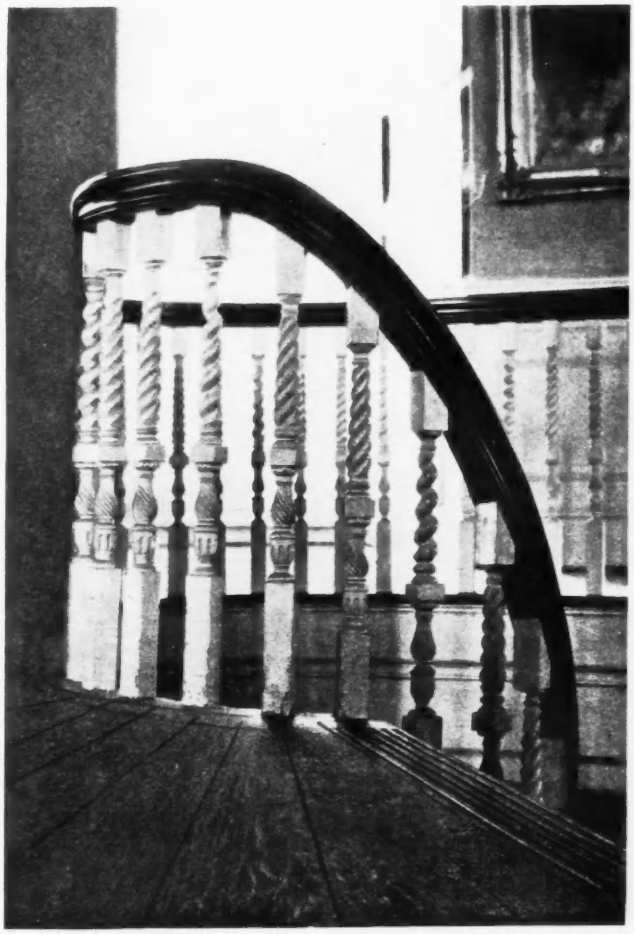
	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	,, 1 0
Arctic glass and glazing with putty	,, 1 2
Cathedral glass and do.	,, 1 3
Glazing only, British polished plate	,, 8
Extra, only if in beads	,, 2
Washleather	F.R. 4

PAINTER

	s. d.
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	,, 1 0
Do. with washable distemper	,, 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,, 3 3
Do. on woodwork	,, 3 6
Do. on steelwork	,, 3 0
Do. and brush grain and twice varnish	,, 5 6
Stain and twice varnish woodwork	,, 1 11
Stain and wax-polish woodwork	,, 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 0
Hanging ordinary paper from	,, 2 9

FROM THE NEW WORLD: 7

MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS



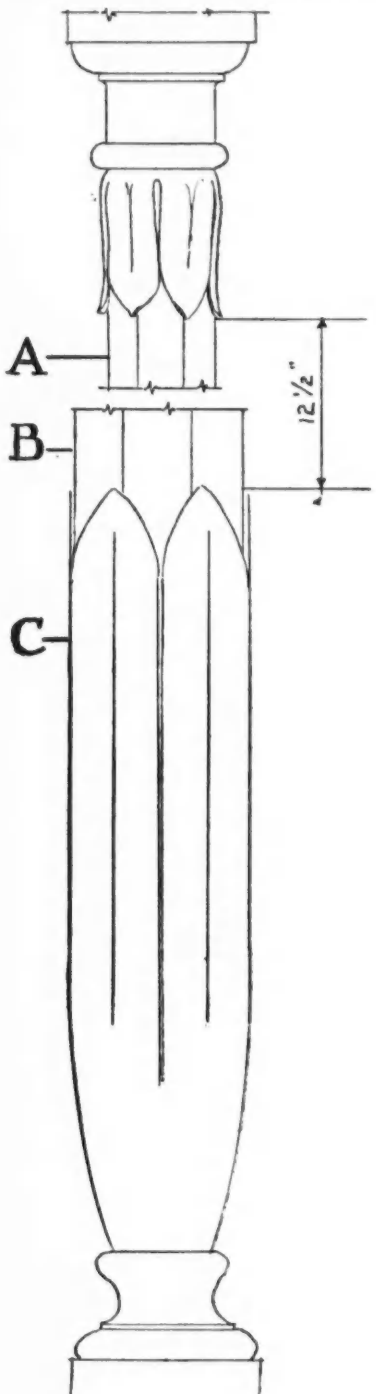
BALUSTRADE IN OLD STATE HOUSE, BOSTON, MASS.

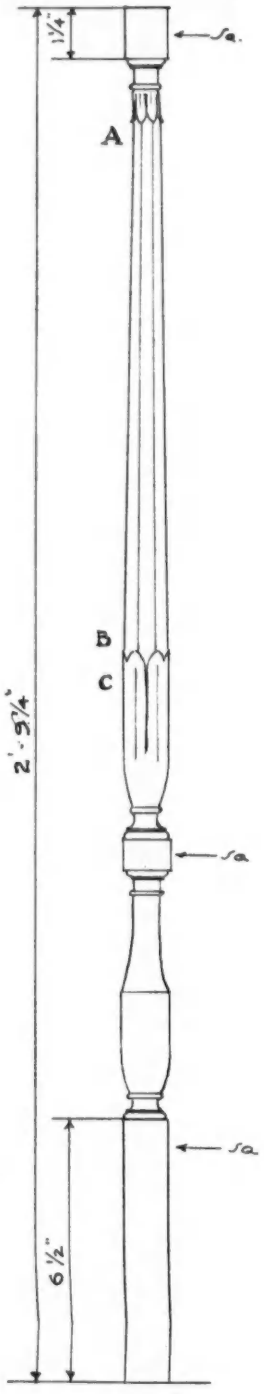
A NOTICEABLE feature of most of the American Colonial work is the restraint shown as regards elaboration. With few exceptions the exteriors were simple and of good proportion—not only as a whole, but also as regards the shape and disposition of the voids. Ornamentation was generally confined to the entrance, and, occasionally, to the cornice.

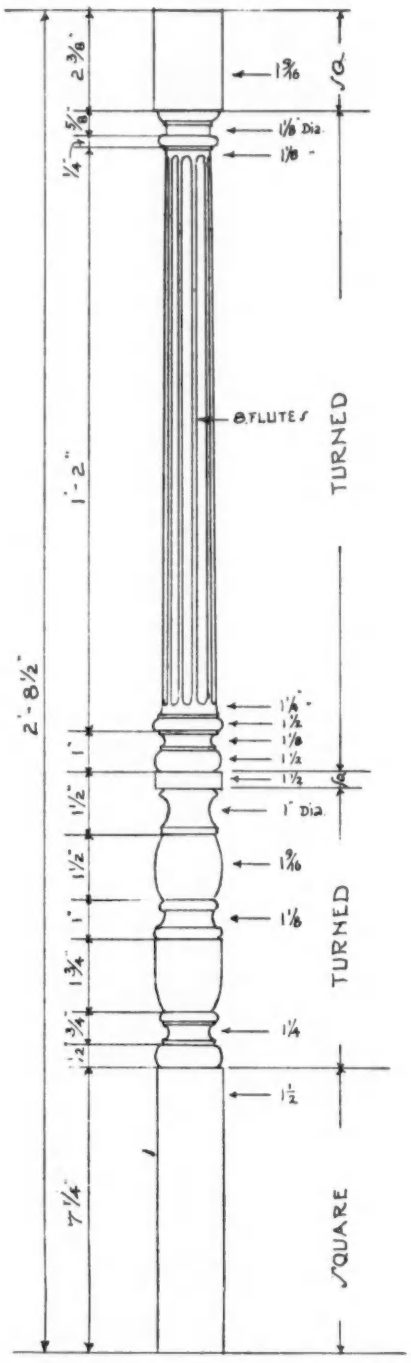
The same reserve was shown internally, where plain walls or simple panelling was the usual treatment. The fireplace and staircase gave opportunity enough for interest, and whether the building was a simple cottage or a mansion, both these features were frequently of exceptional merit.

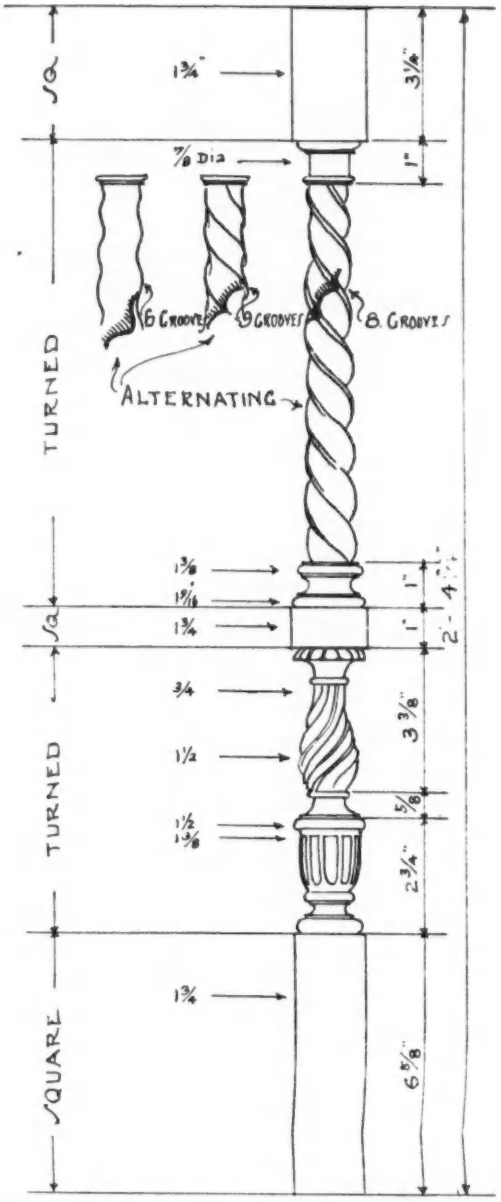
In the staircase both the balusters and newels were occasionally excellently designed and frequently elaborately turned—the latter often having a double spiral. An excellent example figures above, and among the drawings within, prepared by R. Keith Harris.

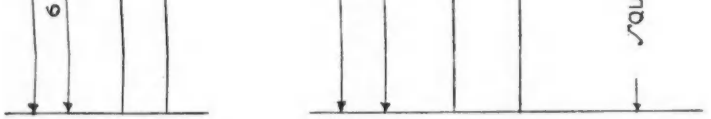
The bottom (square) member of the baluster in many instances carried on the line of the next tread, while in several examples that of the succeeding tread was also picked up by a second square member, so that the sense of horizontality was emphasized throughout.


A
B
C
12½"

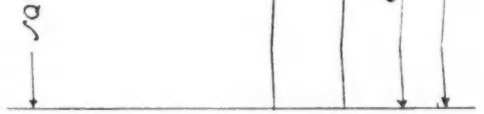

1¼"
Sq.
A
B
C
2'-9¼"
Sq.
6½"
Sq.


2⅜"
1⅜
Sq.
⅜ Dia.
⅛ "
¼"
⅛ Dia.
8 FLUTES
TURNED
1'-2"
2'-8½"
1"
1½
1⅛
1½
1½
1" Dia.
Sq.
1⅜
1⅛
1¼
1½
TURNED
1"
1½
1"
1½
¾
1¾
¾
7¼"
SQUARE

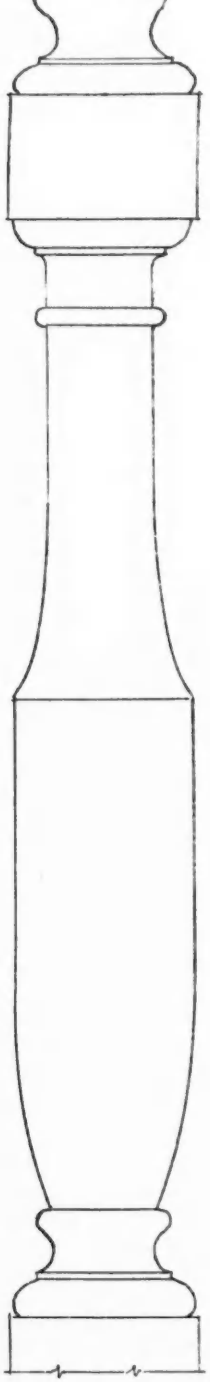

Sq.
1¾"
3¼"
⅞ Dia.
1"
TURNED
6 Groove
9 Groove
8 Grooves
ALTERNATING
1⅜
1⅛
1"
1¾
Sq.
1"
2'-4½"
¾
1½
3⅜"
⅝
1½
1⅜
2¾"
TURNED
1¾
6⅝"
SQUARE



FROM ESSEX INSTITUTE SALEM. MASS.

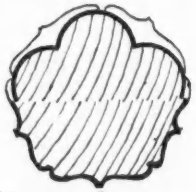


FROM OLD STATE HOUSE BOSTON



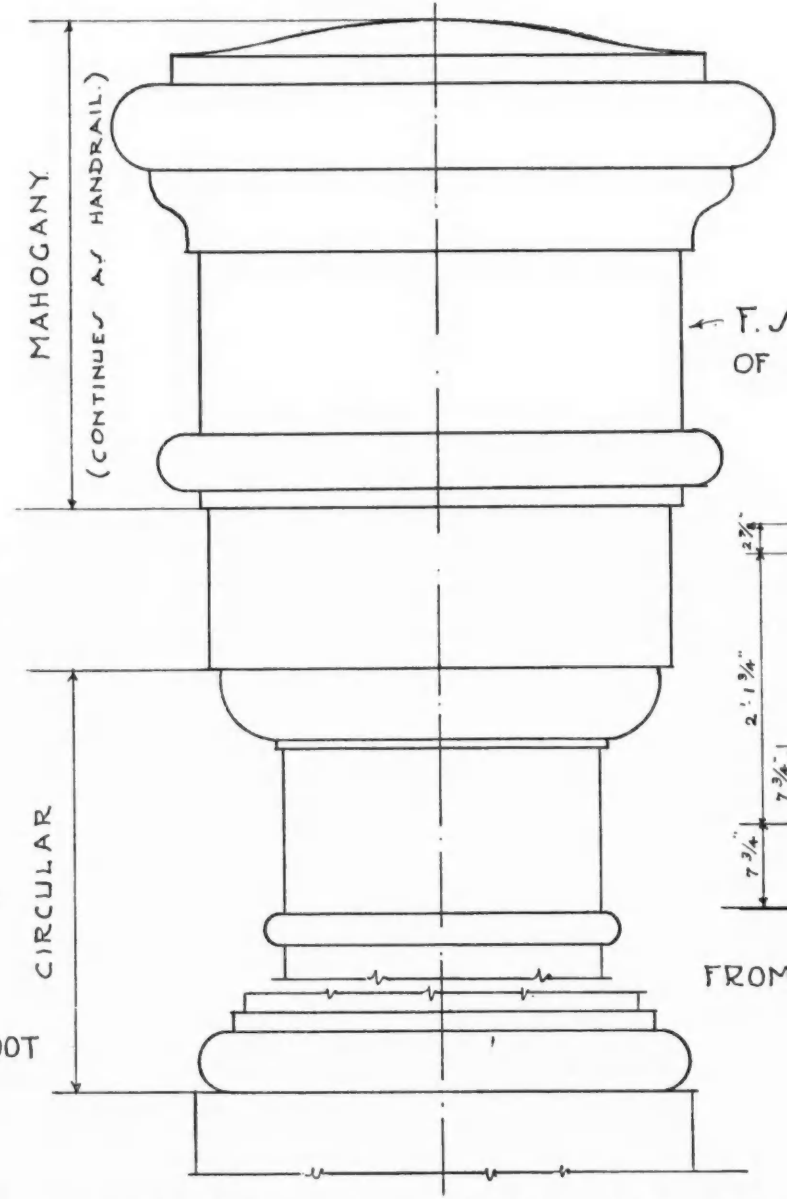
SECT. AT 'A'

HALF SECT. AT 'B'

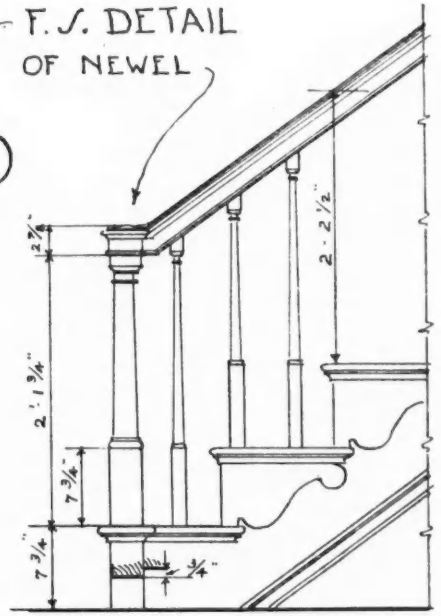


HALF SECT. AT 'C'

SCALES.
3/4 IN. & 3 IN TO 1 FOOT
& FULL SIZE



F.S. DETAIL OF NEWEL



FROM NEWBURYPORT.

R. KEITH HARRIS MEM. A. I. A.

OLD COLONIAL STAIR BALUSTERS FROM MASSACHUSETTS

GAZEBO IN PORTLAND STONE

ERECTED IN STOCKGROVE PARK, NEAR LEIGHTON BUZZARD, BEDFORDSHIRE

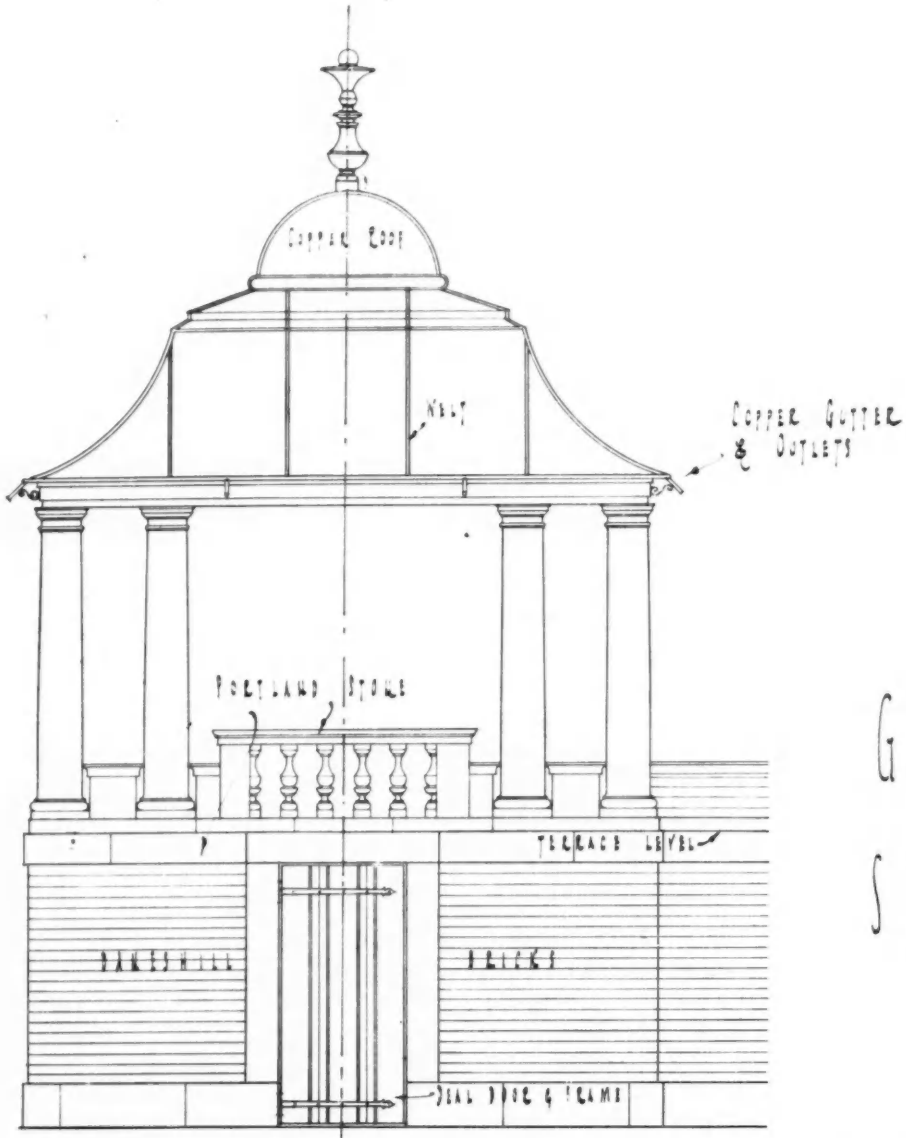
[W. Curtis Green, A.R.A., and Partners, Architects.

LOOKING OUT OVER THE PARKLANDS FROM THE TERRACE

THE gazebo at Stockgrove is one of a series of architectural embellishments recently undertaken upon a beautiful Bedfordshire estate. One of them —the lake-side chalet—was illustrated in a supplement to the issue for September 16 last.

The present little building, of which detail drawings to ¼-in. scale and one-quarter full size, are given overleaf, stands at a corner of the terrace of the large house, which is only lately completed, and overlooks the garden, park and surrounding country.

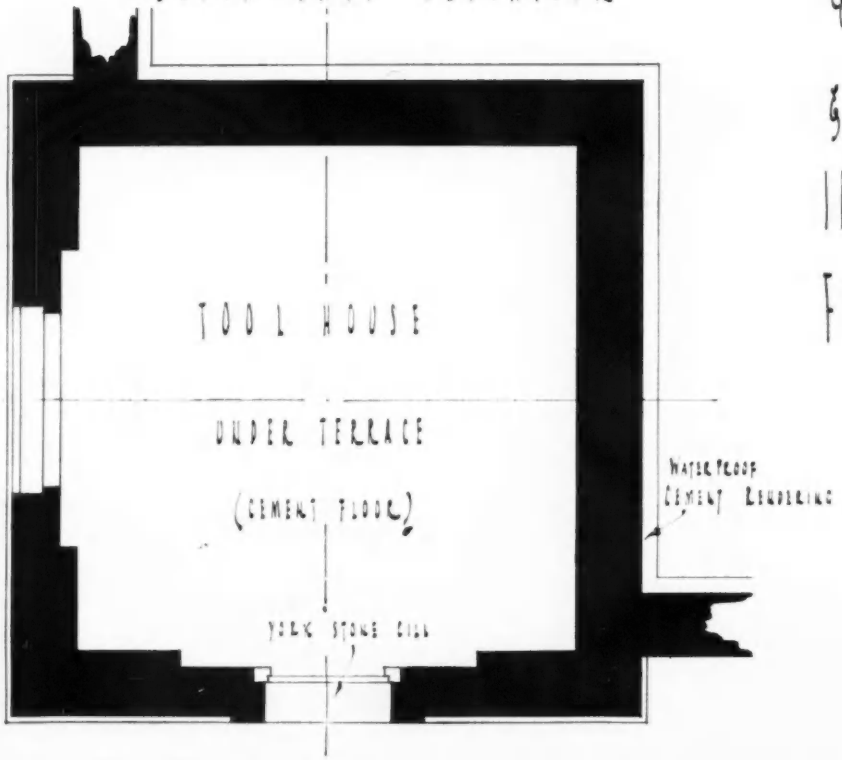
As shown in the photograph reproduced above, the terrace itself flanks a walk secluded within the brick piers and overhead timbers of a pergola ; it presents thereto a retaining wall of Daneshill bricks. The other materials are : Portland stone, York stone paving, copper roof and panelled plaster soffit.

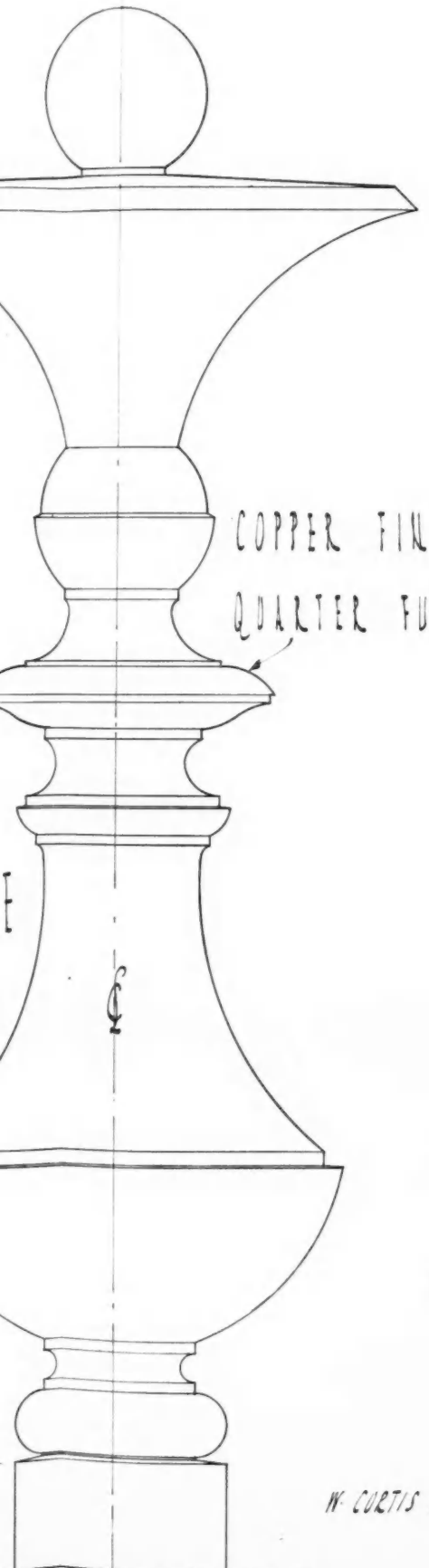


SOUTH EAST ELEVATION

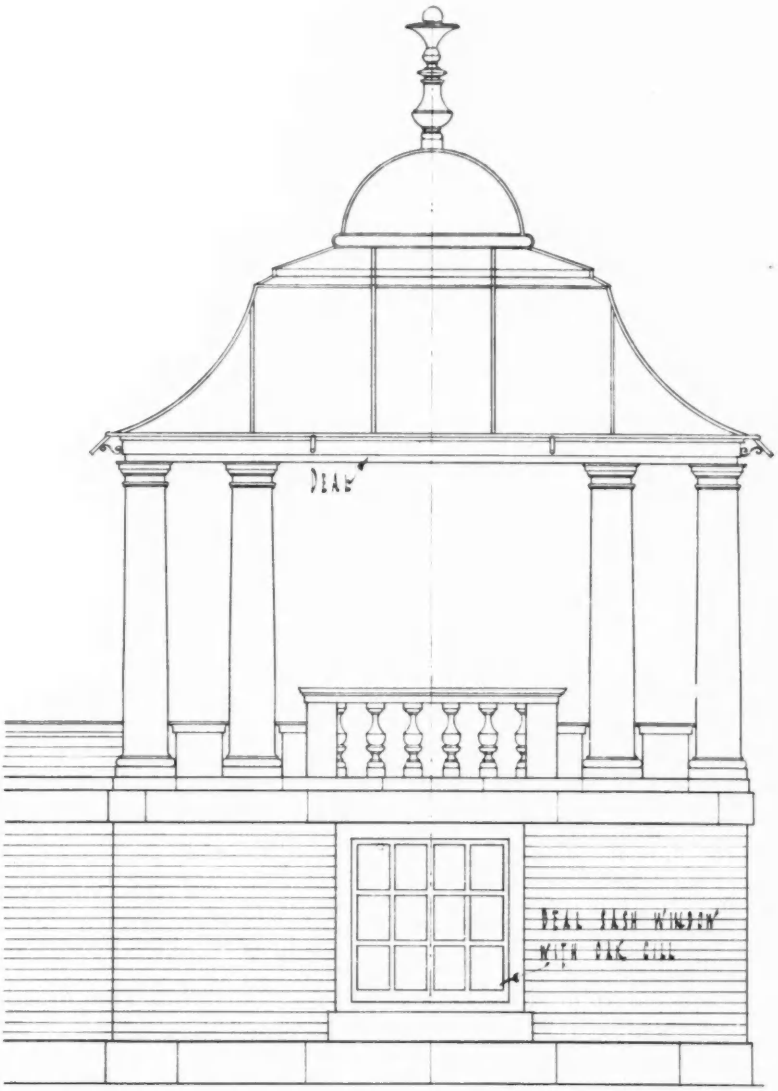
GAZEBO STOCKGROVE

QUARTER FULL SIZE & QUARTER OF ONE INCH TO ONE FOOT DETAILS

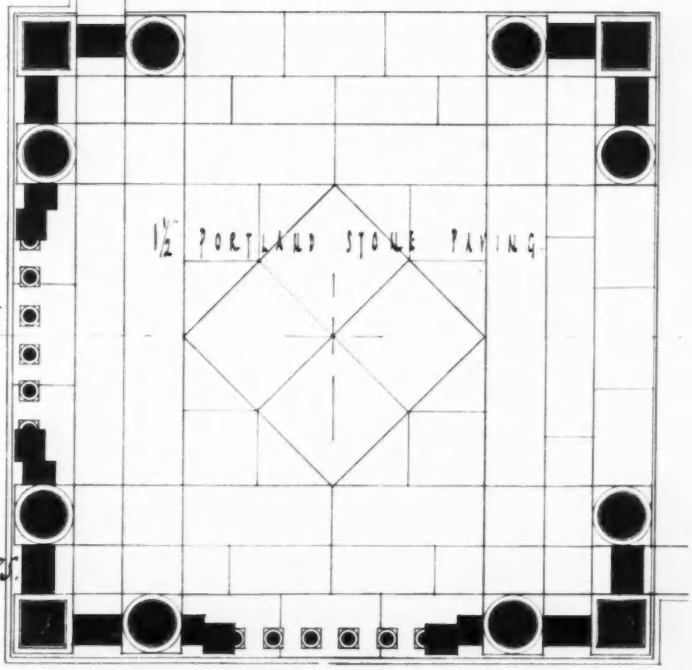




COPPER FINIAL
QUARTER FULL SIZE



SOUTH WEST ELEVATION

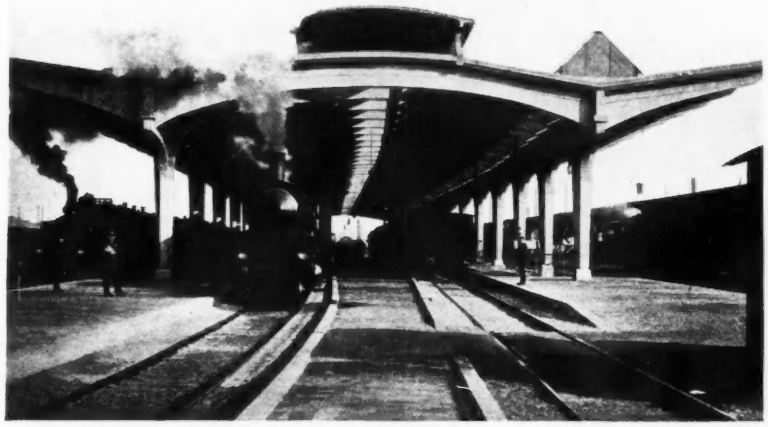


TERRACE
LEVEL
PLAN

W. CURTIS GREEN A.R.A & PARTNERS.
- ARCHITECTS -

SELECTED PRECEDENTS:

MODERN RAILWAY STATIONS



1. *THE CONCRETE CANOPY OF THE MAIN PLATFORMS, NUREMBERG STATION.*

[By courtesy of Bauunternehmung Dyckerhoff und Widmann, A.-G., Wiesbaden-Biebrich.

RAILWAYS have been with us for close on a hundred years, but, except on metropolitan and suburban lines, we are still far from anything approaching a standardized design for railway stations. In nearly every case where a grandiose monumental effect was aimed at—as in St. Pancras, London, or the Gare de Lyon, Paris—the result has been infinitely more lamentable than in the merely mean or negligible structures which generations of railway directors have thought good enough for the public and their purpose.

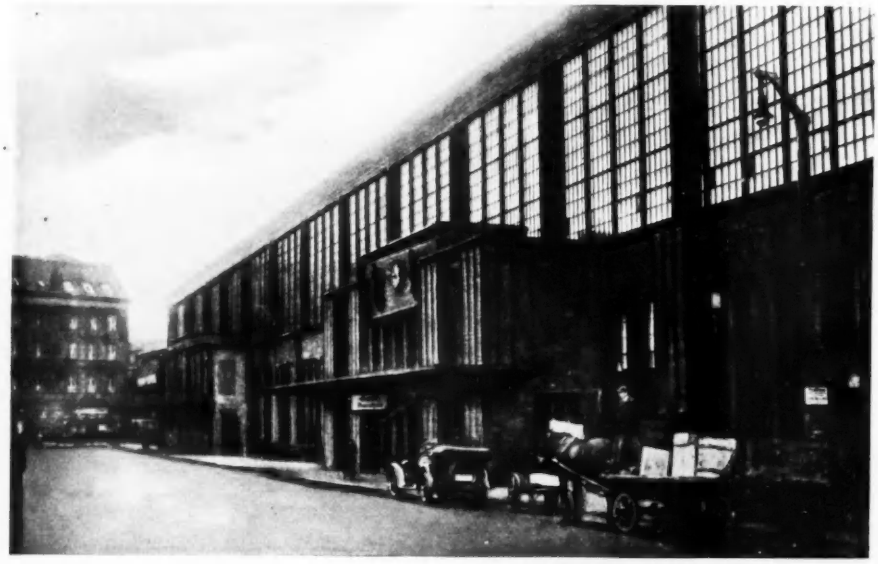
America has so far been unable to provide any better models than colossal imitations of Roman baths. The railway station has no precedents in antiquity. Attempts to adapt it to classical forms, so as to perpetuate reproductions of classical decorations, are foredoomed to failure. All that it calls for is the proper fulfilment of technical requirements, with due regard to co-ordination and proportion. It is only during the last decade that the station has been allowed to evolve rationally along its own lines, unhampered by irrelevant considerations of "style."

Figure **1**, *a straightforward solution of the problem of the isolated platform canopy, is a good example of how the substitution of reinforced concrete for fabricated steel often results in simplification of shape as well as increased homogeneity. The whole gains by the reduction in the number of its parts. Figures* **2** *and* **3** *show recent reconstructions of important stations in large cities. Both achieve fine breadth of scale with a minimum of incidental detail—the former in granite, and concrete with an exposed granite aggregate; the latter by a superstructure of vast steel-framed window-bays supported on massive brick piers. Figure* **4** *illustrates what has become the standard type of street entrance for London Underground stations: a purely functional design that it would be hard to improve upon.*

Figure **5** *(included for purposes of contrast, though not, strictly speaking, a railway station) is an interesting example of functionalism assimilated to the essential structural features of the domestic architecture native to the Bavarian Alps. The great portal of this cableway terminus achieves an almost Egyptian dignity, and is yet perfectly in harmony with its surroundings.*

P. MORTON SHAND

2. *THE RECONSTRUCTED CORNAVIN STATION, GENEVA.*



3. *NORTH FRONT OF THE RECONSTRUCTED FRIEDRICHSTRASSE STATION, BERLIN.*

4. *MANSION HOUSE STATION, LONDON UNDERGROUND RAILWAYS.*

5. *THE BAD REICHENHALL TERMINUS OF THE PREDIGTSTUHL CABLEWAY, GARMISCH-PARTENKIRCHEN, BAVARIA.*

[By courtesy of Hochtief A.-G., Essen.

THE ARCHITECTS' JOURNAL

WEDNESDAY, NOVEMBER 25, 1931

DUMPING—AND DUMPING

IT seems that politics, as they are purveyed to and understood by the patient British public at large, proceed by a series of slogans, catchwords and wise cracks.

Prominent among these at the moment is the economic problem so ably and satisfactorily summed up in the one word DUMPING.

Dumping, if one accepts the word at its type face value, would appear to consist in the flooding of an already well-provided-for market with products which no one really wants and most will hesitate to buy. Thus, we are commanded to understand, the Russians, dishonest rabble of slave drivers, are *dumping* their rotten butter and worse wheat into our beloved country, while some unspecified bodies are being so unpatriotic as to buy it, others even to eat it !

This, or any other form of dumping, it would not be our business to discuss were it not that the word, like so many of Fleet Street's irresponsibilities, assuming a life of its own and swelling with each edition passed, has included within its orbit every form of manufactured importation which, through one cause or another, touches the insular Briton in a sensitive place; and once the yellow press takes it as its duty to revile in general all successful foreign competition, we see another, no less clear, in attempting to find out why so much of foreign manufacture finds a ready sale with us, even when, it may be added, its price is not competitive.

Generally speaking, foreign goods compete in price, but seldom in price alone, and we can think of several examples—enamelled ironware, unbreakable crockery, to take but two—where to the competition of price is added that of design and colour; and we know that of the two, the latter is the more important. Superiority in design and the use of good colour has sold thousands of pounds' worth of Swedish enamelled ware. And if we go on to discuss items of greater value which are definitely not competitive in cost, we pay respects once more to Sweden, whose refrigerators, vacuum cleaners and cookers, being models of logical thought and tempered design, can regard the English market as peculiarly their own.

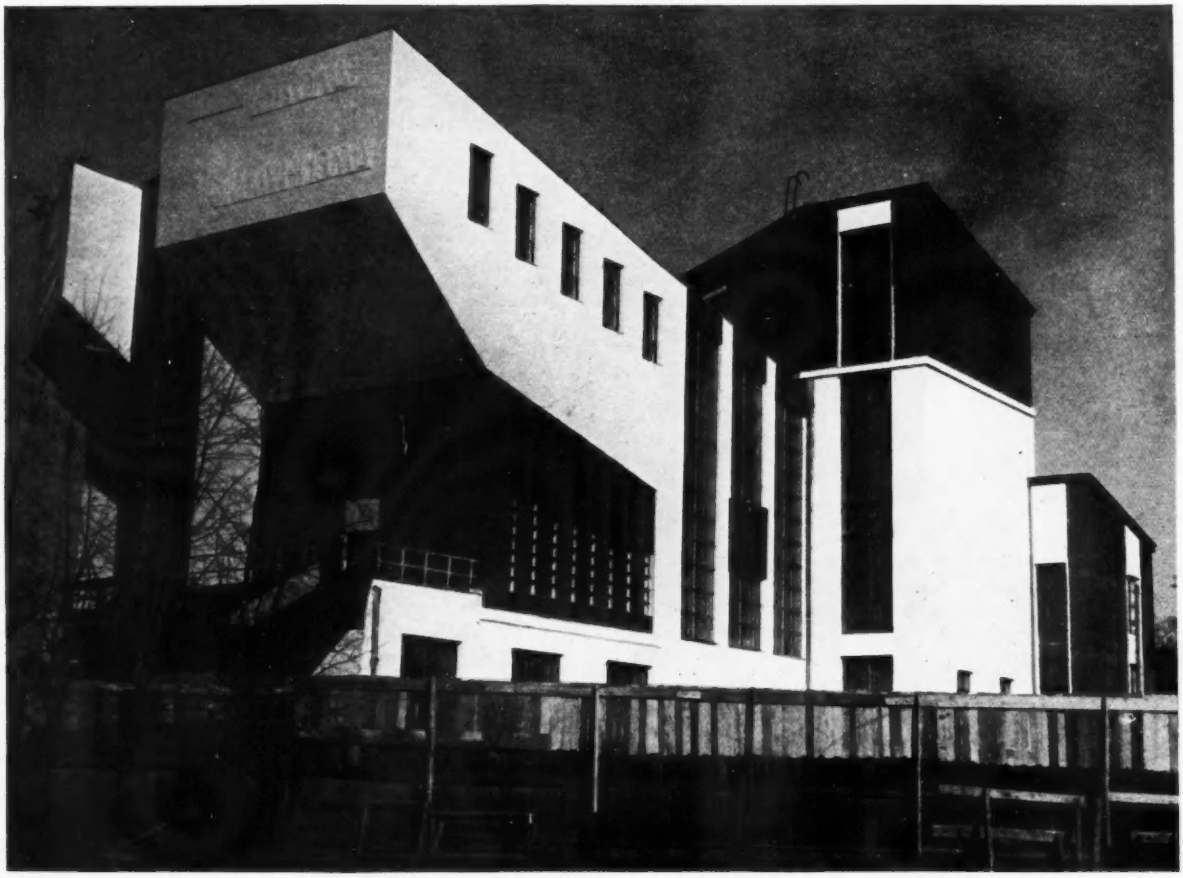
Now, this international competition, which bears of course no relation to any form of dumping, goes deeper than pure commercial rivalry. Mr. Frank Chitham, of Harrods, at a recent luncheon, spoke of the new risks which had entered into what were once regarded as *stable lines of merchandise*. His phrase is significant because it seems to us, as it must also to many other architects, that the continued recognition of *stable lines* as things of satisfactory permanence is the first cause of the subjugation of English goods by goods of Continental origin, and that not until every thing we make is surveyed in the spirit of fitness for purpose by men of cultured intelligence can we hope for real superiority in those commercial fields where design counts for as much as price.

This may not be thought to be an architect's job, but in truth it is, and the more architects see fit to concern themselves with the design of manufactured products of all kinds the sooner will our kings of commerce be shown the way along which, in the middle distance, we may see our rivals in their joyful progress.

Culture is a much-maligned word. It was once spelt KULTUR, and gave us infinite amusement, the German seeming to us, in those days, to be so comically serious over what came to us gracefully and as if by natural right.

But it seems as though we may have been wrong to laugh, because it is now natural that Germans and Swedes should design better, more beautiful and more logical buildings than we can—and so we go over there rather seriously to see how they do it.

The point of which is that we might as well face the truth, be serious, and learn as quickly as we may the attitude of logical thought and sensitive appreciation of material and form which make our Continental friends the cultured people they are. That is part of our mission as architects to this brutal and vulgar civilization in which we find ourselves. Quite clearly it is up to us.



THE NEW RUSSIA: A WORKERS' CLUB AND THEATRE, MOSCOW

Mr. Clough Williams-Ellis answered, for the benefit of the Architectural Association, on Monday, his self-posed question: "What did I see in Russia?"

"Well," he said, "the far-sighted, co-ordinated, town and country planning of a whole continent . . . . vast new works and housing schemes, great office blocks and public buildings, schools, hospitals, crèches, clubs, theatres, cinemas. . . . The scale of the thing is just fabulous. . . .

"All the new building is in the Modernist vein, some good, some indifferent, a great deal rather dull, but (and what a relief to an Englishman!) nothing anywhere that is vulgar. Everywhere one perceives a ghostly German Svengali behind the Russian architectural Trilby. They have swallowed, but not quite digested, the Functionalist technique, and a good deal of their stuff won't function."

The lecturer had something to say about the five-year plan. His paper is summarized, together with a further illustration, on page 704 of this issue.

NEWS & TOPICS

UGLY LONDON FEATURES

MR. GEORGE MANSELL has been criticizing London, or parts of it, at a lecture at the Royal Society of Arts. Mr. Mansell first passed strictures upon ugly street signs; and he should be supported quite solidly in this if he really means business. He next criticized the hospitals, whose impoverishment is gradually turning their façades into charitable hoardings; and in this again his complaint should be taken with seriousness, because if the outsides of hospitals suffer in this way, their insides will one day follow suit. The remedy is public ownership and no more begging, though that is beside our point. Finally, he criticized Ludgate Circus, which is fair game, though no less useful as a target for being the most hopeless hotch-potch imaginable. Mr. Mansell must be congratulated on crowding so much effective invective into the short time at his disposal.

THE R.I.B.A. JOURNAL

The November 7 issue of the *Journal* of the R.I.B.A. is the first of a new series printed in a new type and bound in a cover of an entirely new design. The Sub-Committee of the Literature Committee responsible for the scheme is to be sincerely congratulated on its work, and Mr. Martin Briggs, the Chairman, and Mr. E. C. Carter, the Editor of the *Journal*, in especial, are deserving of gratitude. The cover is now printed in black ink on a light coloured paper, thus giving a clean, bright effect, which was lacking before. On the front page, the principal item of interest is the badge of the R.I.B.A., newly drawn and cut in wood by Mr. Eric Gill. As pointed out in an editorial note at the beginning of the issue, Mr. Gill's design discards a number of variations introduced during the course of the nineteenth century, and goes back to the original blazon of 1835. Mr. Stanley Morison, the well-known typographer, was called in as a consultant, and it is doubtless on his advice that the beautiful eighteenth-century Baskerville type was adopted. (THE ARCHITECTS' JOURNAL, incidentally, changed over to this type face at the beginning of 1926.) The old form of *Journal* was apt to give one the impression of being a survival from other times. This is no longer true, and without being in any way blatant about it, the new series definitely proclaims itself as a product of the post-war period.

VALUE FOR MONEY IN TOWN-PLANNING

It speaks highly for the intelligence of local authorities that national economy has not been made the excuse for a reduction in expenditure upon town planning. It is true that town planning is carried out largely by experts whose agreements are for long terms, but there has not been, in fact, any diminution in the programme. We may take it, therefore, that the complaint from a member of the Axbridge Rural Council that town planning was costing Axbridge too much and giving Axbridge too little was due in the main to the unenlightened attitude of one recalcitrant councillor, and did not represent the considered views of the rural council. This attitude belongs indeed to the pre-planning age.

MR. KEEN'S VILLAGE SKETCHES

A remarkable set of illustrations of the interesting twin villages of Oxted and Limpsfield was exhibited privately at Oxted on Saturday. The artist is Mr. Arthur Keen, the well-known architect, who told me in his own words how he came to make these sketches. "The history of the matter is that there has been a great deal of talk lately about the need for collecting all kinds of records of villages, because of the danger that before long they may be changed out of all recognition. So I decided that I would devote my spare time during the past summer to drawing the two Surrey villages, in one of which I live, as a record of their actual condition at the present time. I intended at first to make a continuous drawing of each side of the village streets in a kind of pictorial elevation, but there were difficulties in doing this, and in the end I did a series of perspective sketches, showing successive groups of cottages and other buildings. Then I made two or three drawings of each of the churches, and finally drew the old houses and farm cottages in the district around—altogether some fifty or sixty pencil drawings showing exactly the present conditions. I then got them mounted to a uniform size. At the same time I made a good many notes on the history of the houses as far as one could find it out."

★

At the exhibition, Mr. Keen spoke about the matter of village records generally, in the hope that it would be taken up and something of the same kind done in other places. As he said, there are many very charming old villages in this district, all of them menaced by housing schemes, arterial roads, new railway stations and developments of all kinds. Village museums are, of course, wanted, and if some permanent store place could be got it would seem not difficult to make very interesting and valuable collections of all kinds of things relating to the village; books, prints, antiques, maps, manorial records and so forth—certainly photographs and pictures. It is hoped to hold a public exhibition a little later, at which all such things as these will be put on view.

SIR MARTIN CONWAY'S BARONY

The conferring among the dissolution honours of a barony upon Sir Martin Conway, "for political and public services," is an event most welcome to all who have a regard for civilization in the wide sense. It is thirty years since he became Slade Professor of Fine Arts at Cambridge. That appointment was only the prelude to the particularly versatile career of an adept in the art of living. Many of his adventures in that art have been recorded by his own fluent pen; and his influence for good taste has been widespread.

MR. COUNCILLOR GUY DAWBER

I have always held that it is most important that architects of high standing who have the inclination to public-spirited self-sacrifice (and the time to give) should interest themselves in local government affairs. It is, therefore, with particular gratification that I receive a note from Mr. E. Guy Dawber, acquainting me that he has been elected a member of the Marylebone Borough Council for the Hamilton Terrace Ward. Congratulations to him; and to the Council.

THE "WANTED" CONFIDENCE TRICKSTER CAUGHT

My readers will be interested to know that the confidence trickster referred to on this page last week is now safely under lock and key. I should like to be able to say the JOURNAL had lent a hand in his arrest; but the fact is, he was recognized in the street and apprehended from the description already otherwise circulated. At all events, he will trouble us no longer, for a stretch; but there are others abroad.

ASTRAGAL

The new wing provides accommodation for sixty-five private patients. Designed as a complete unit, it offers all the advantages of a general hospital.

AT THE ROYAL

St. David's Wing for

DESIGNED BY

THIS building, erected through the generosity of Sir Howell J. Williams, occupies the site in Manor Gardens between the casualty block and the nurses' home, facing south, and is carried out similarly in red brick and Portland stone.

The central entrance doors, of teak, lead into a spacious hall. On the right is a large reception room, with, beyond, consulting rooms, while at the end of the corridor is a covered entrance way for ambulance cases. On the left are the secretarial offices and temporary light department. In a central position opening off the hall is the staircase, constructed of teak, with a balustrade of teak and wired glass for easy cleaning.

The first and second floors have twenty rooms for private patients, each fitted with a lavatory basin and exchange

The entrance hall has a floor of marble laid in black and white squares; plaster-panelled walls; and teak joinery. Beyond the central doors are the staircase and lift.

The sun room : interior. Situated on the top floor of the wing, this spacious apartment is flooded with light and warmth. It is fitted with an electric fire, wireless, etc.

NORTHERN HOSPITAL

Private Patients

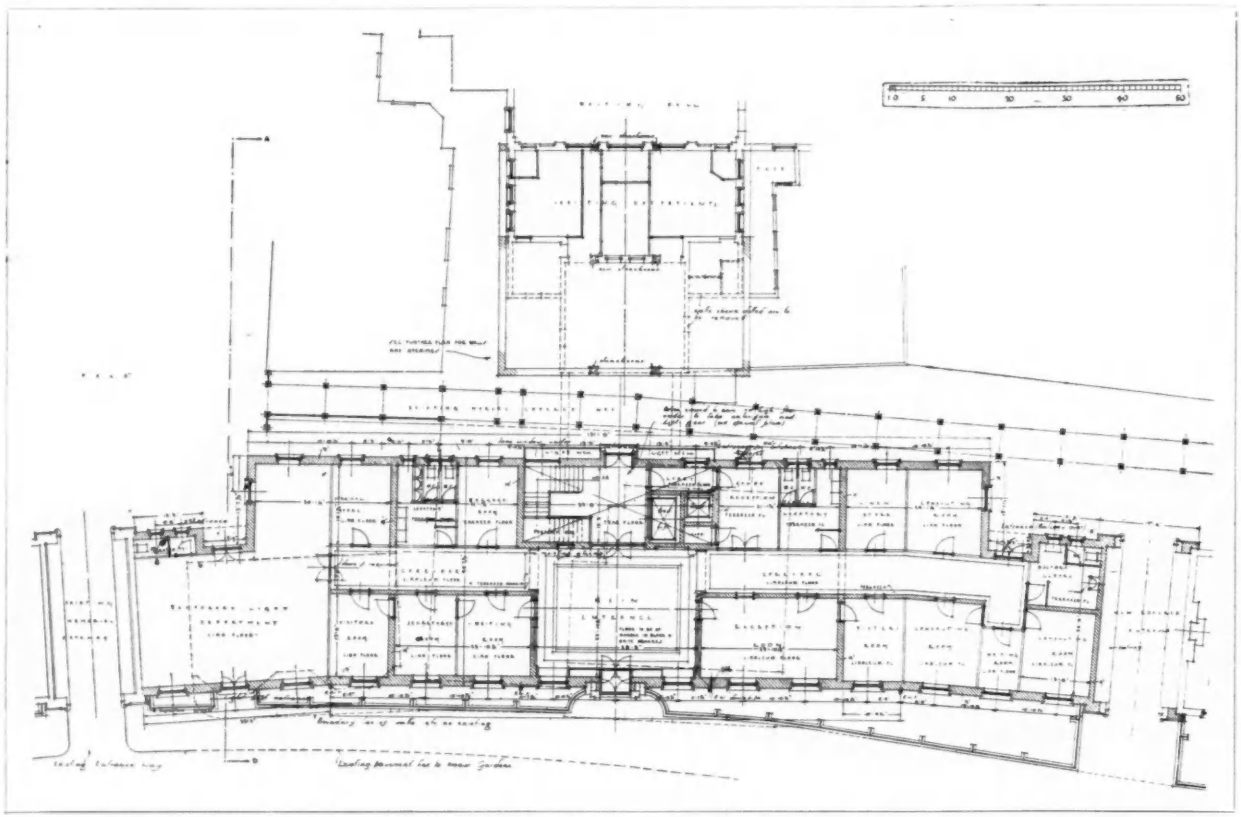
ADAMS, HOLDEN & PEARSON

telephone, and hot-water radiators supplemented by electric fires. The sisters' room is placed centrally opposite the staircase, and each patient is in communication by a system of illuminated call signals; the corridors are covered with rubber for the sake of quiet.

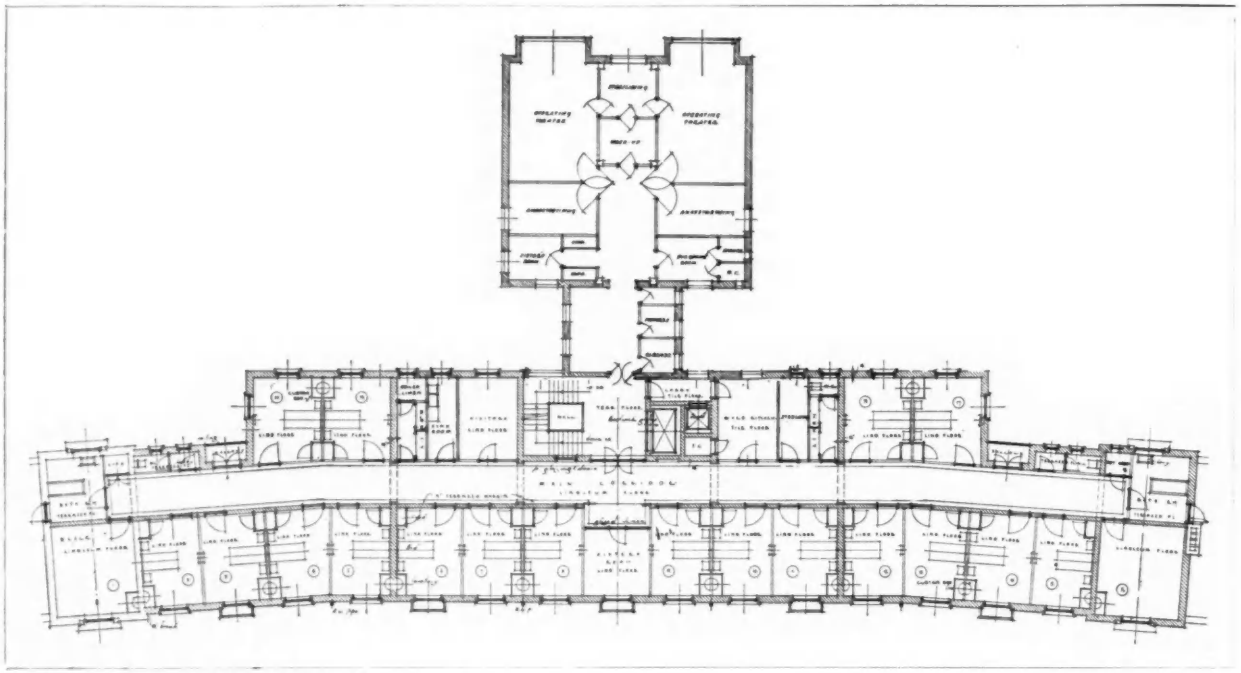
The windows are large double-hung sashes, and the Hospital Committee laid special stress on the necessity for reducing the number of window panes. The architects, therefore, provided as many large panes as was compatible with the elevation, and all corners have been rounded.

During the progress of the building, it was decided, in the interests of height and light, to reverse the positions of the kitchen and operating suites. The kitchen, therefore, was placed on the first floor, the food being conveyed by special trolley lift direct to the patient,

The sun room : exterior. This view shows not only the special windows to trap the sunlight, but the roof garden outside, from which fine views are obtained.

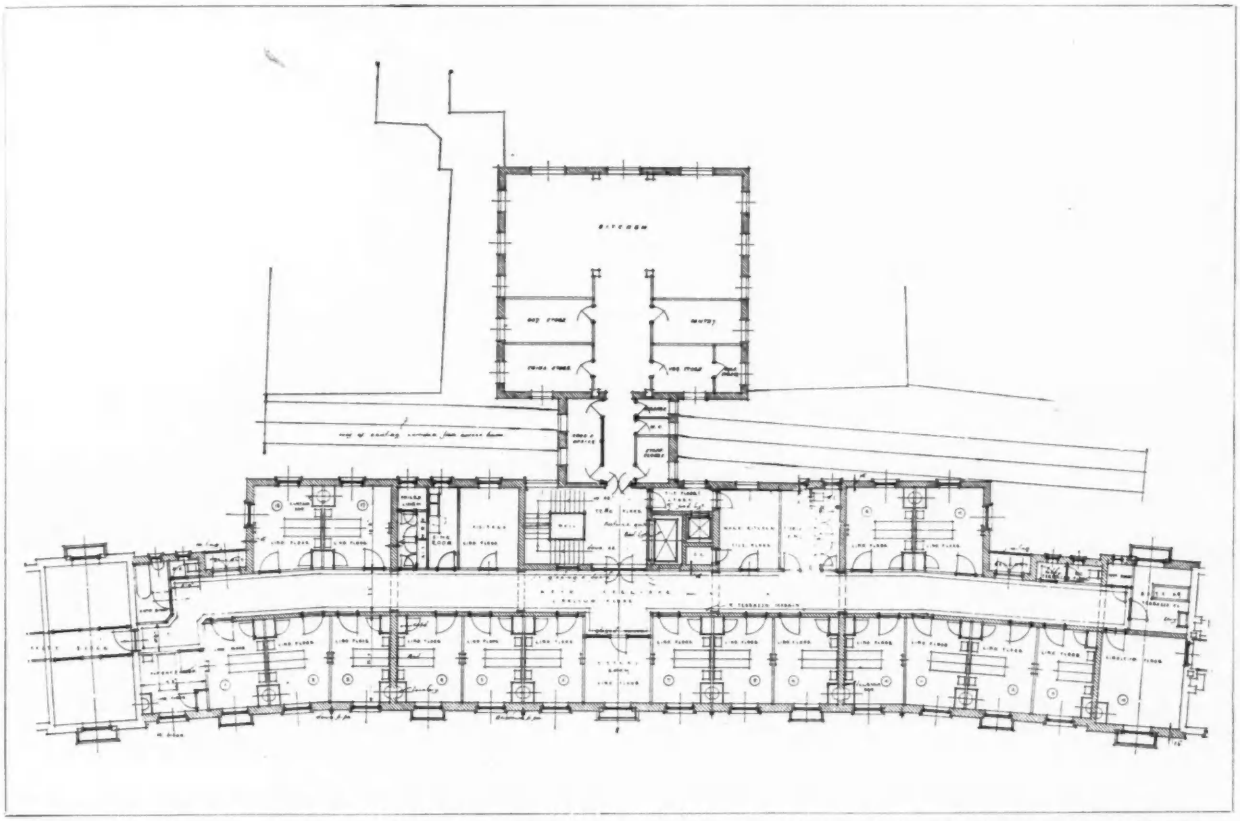


Ground-floor plan. On the left of the entrance hall are the secretarial offices, on the right the reception and consulting rooms.

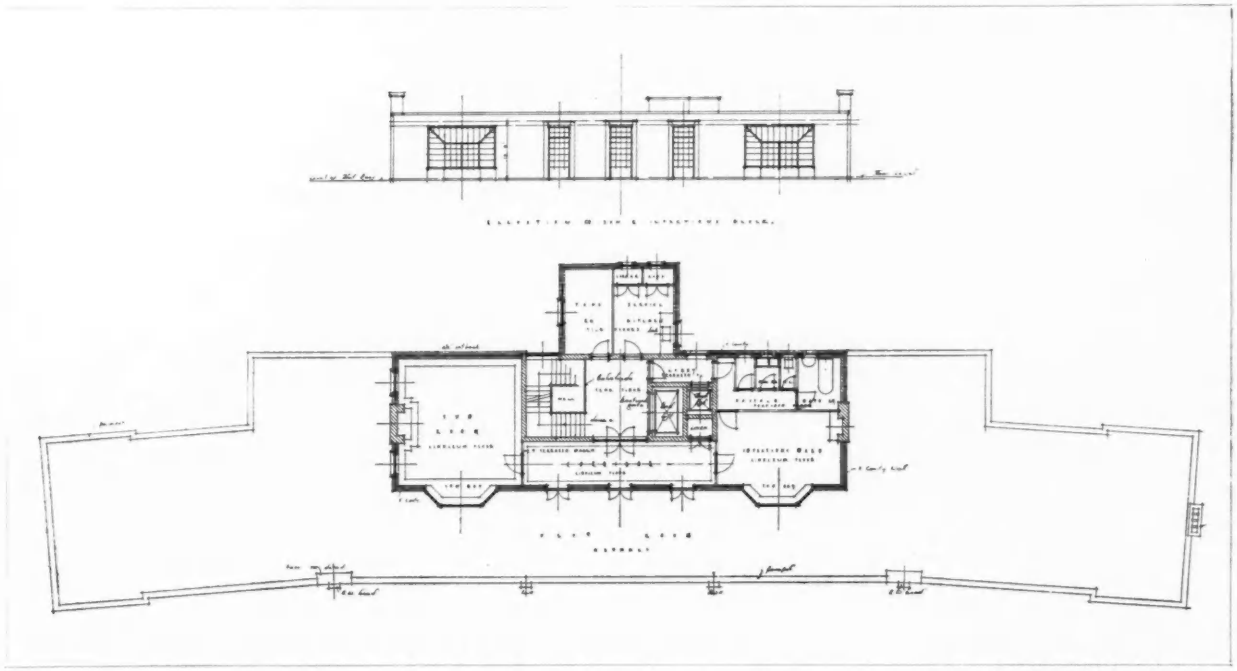


St. David's Wing, Royal Northern Hospital, N.]

Second-floor plan. On each floor, in addition to ward rooms, is a visitors' room for the use of patients' friends.

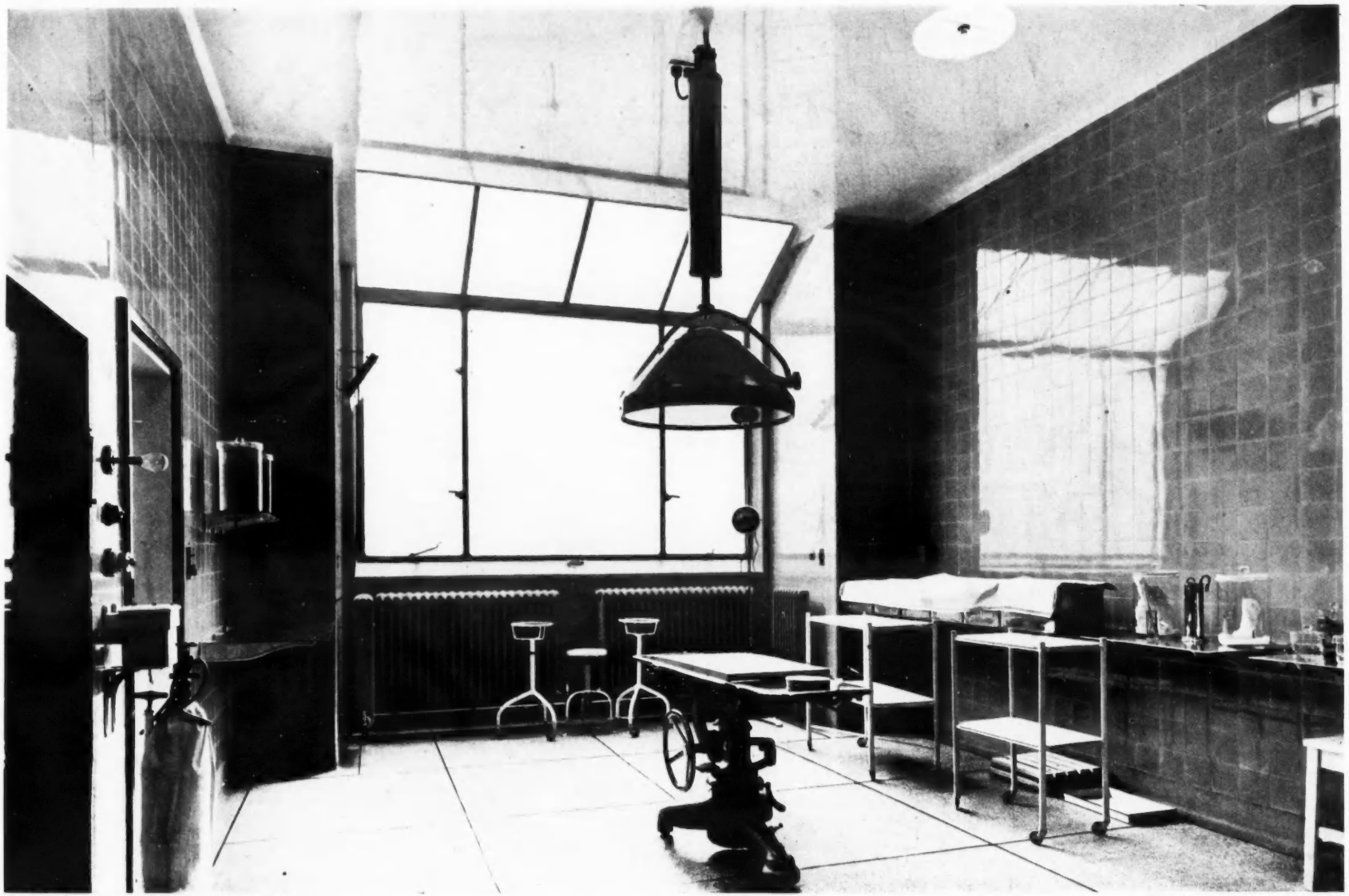


First-floor plan. There are sterilizers and bathrooms and twenty rooms for private patients on each of the first, second and third floors.



[*By Adams, Holden and Pearson.*

Fourth-floor plan. Here are the sunroom, roof garden and a section for the isolation of patients suffering from septic conditions.



St. David's Wing, Royal Northern Hospital, N.] [*By Adams, Holden and Pearson.*

One of the two operating theatres. The walls are faced with grey-green tiles, and the floors are of light-green terrazzo, divided into squares by expansion strips. The suite consists of twin theatres and anæsthetizing rooms, served by centrally-placed sterilizing and wash-up rooms. It was designed in close collaboration between the architects and the surgical staff.

without, as is usual, being distributed from the ward kitchens.

The operating suite is self-contained and worthy of special note. The walls are faced with grey-green tiles, specially chosen for their soothing colour. A noticeable feature is the reduction of doors to the minimum, it being possible, by an ingenious arrangement, to transfer patients from the anæsthetizing room to the theatre by reversing the single doors leading to these rooms so that they project into the lobby, closing it at 90° and allowing sufficient room for the trolley to pass screened from view. The windows are formed as projecting bays to afford top lighting, and Zeiss lamps are used for the artificial illumination.

The third floor, which is planned similarly to the first and second floors, is used temporarily as nurses' bedrooms, but the immediate success of the new wing makes it likely that it will be used for patients in the near future.

The top floor contains the sun room and two isolation rooms. The former, with its cheerful fire and projecting glass bays, is a notable feature.

Each of the patients' rooms is fitted with lavatory basins, with hot and cold water; a telephone connected with the exchange; wireless; and signalling lamps to secure the attendance of nurses at any time.

St. David's Wing, Royal Northern Hospital, N.] [*By Adams, Holden and Pearson.*

In the kitchen the walls are tiled to their full height, and the ceiling is covered with opal glass. The latest apparatus is installed for cooking and for the rapid service of hot food to each room. The catering is under the supervision of a qualified dietician.

THE BOLSHEVIKS AS BUILDERS

BY CLOUGH WILLIAMS-ELLIS

I WENT to Russia in self-defence—I was tired of being told what I strongly suspected were lies, both by the press and by people generally without being able to retort with complete certainty "You d——d liar!"

Now that I have been there I have the daily satisfaction of—shall we say—tentatively suggesting that certain current English views are tinged with error.

I do not mean the grosser errors about chained slave gangs, boiled babies, nationalized women and such like, but less picturesque inventions, such as the legends that "You can only see what they choose to show you." "The Five-Year Plan is all a façade and the most colossal failure anyway." "Labour is forced, and the people miserable and underfed."

Just because I have been so rash as actually to go and see things for myself, I am told all this more than ever by those who haven't—just to correct my unnatural, unaccountable and unpatriotic enthusiasms.

That I should return fatter and jollier than I went out, and dare to say that I found myself infinitely stimulated by the most marvellous summer holiday ever, amongst the friendliest people, was, it seems in the worst possible taste.

As to things being specially window-dressed for my or anybody else's benefit, or being shepherded round, everyone was so infernally busy getting on with the job, that the great difficulty everywhere was getting hold of adequate guides and interpreters.

For the most part one snooped around on one's own, and in that fashion I saw just precisely what I had determined I would see—going here, there and everywhere—by air, rail and steamer. And what did I see? Well, the far-sighted, co-ordinated town and country planning of a whole Continent. The raising of great new industrial cities on what two years ago was barren steppe, new satellite towns by the score, the old towns being re-planned and re-conditioned—vast new works and housing schemes, great office blocks and public buildings, schools, hospitals, crèches, clubs, theatres, cinemas, clinics, Soviet halls, stadia, co-operatives, factory kitchens, etc.

The scale of the things is just staggering—fabulous.

And how are they doing it all? Not too well, though the marvel is not that it is done badly, but that it is done at all.

Short of just every single thing needed for building, desperately short of skill, and even of the roughest man (or woman) power, none the less, they are achieving prodigies under conditions that we should certainly call impossible.

In short, they are doing, against appalling odds, what we have never attempted.

In a decade or less, they will have done for all Russia much what we did in the peak century of our industrial revolution—but with most of our mistakes left out.

They think that what we built has become our prison, and may well become our tomb, whereas they are building a new Jerusalem—a heaven upon earth—in place of that more speculative hereafter that has now been abolished by decree.

There are too few everybodies in Russia—far too few architects, who, good or bad, are all grossly overworked.

Hence the rather orphaned look of many of their buildings—they seldom have time to visit them during construction, and never after they are finished.

There is, indeed, no such thing as "finish" in our sense.

You never quite know whether a building is being "built" or "repaired." Very often it's both.

Their joinery is a scream—partly the architects' fault for not designing more realistically for green timber and rough-and-ready labour. They do not sufficiently allow for the "war-time" conditions on the site and in the shops—the poorest materials, the labour diluted with boys and girls straight off the land.

For five months the weather is what we should call utterly impossible for any building work—terrific frosts—Arctic winds—snow, and then in spring and autumn torrential rains—the whole roadless country a quagmire.

And yet they are doing it—and yet they are showing the rest of the world how.

All the new building is in the Modernist vein, some good, some indifferent, a great deal rather dull, but (and what a relief to an Englishman!) *nothing anywhere that is vulgar.*

Everywhere one perceives a ghostly German Svengali behind the Russian architectural Trilby.

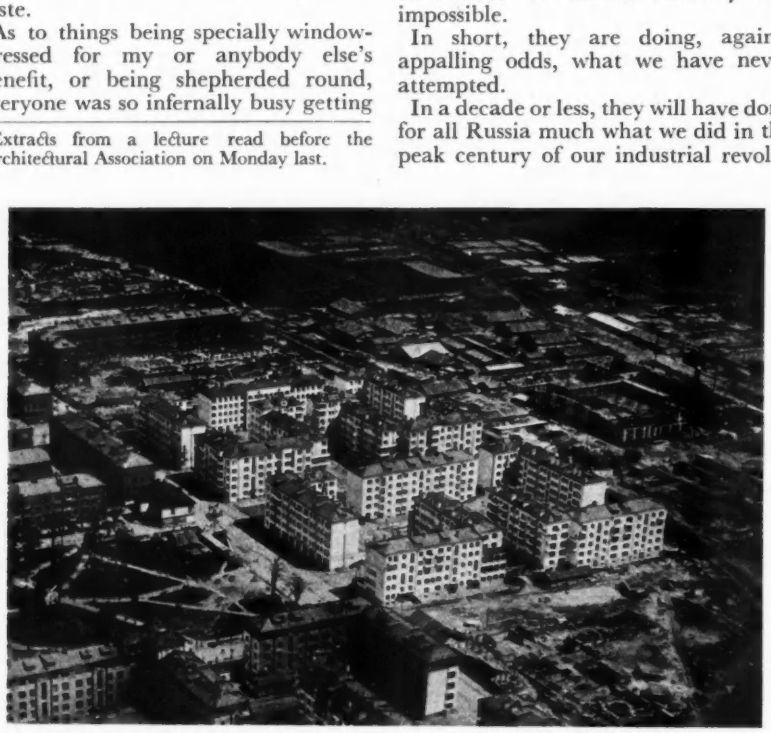
They have swallowed, but not quite digested, the Functionalist technique, and a good deal of their stuff *won't function.*

They have learnt all the fashionable tricks—thinking that they have cast away all sentiment and tradition, they are really falling into a neo-romanticism—mechanistic.

Really, the greatest achievement of, and advertisement for, Communism and the Five-Year Plan is that it has managed to make the Russian himself function.

Inefficient, unpunctual, lazy, untidy, procrastinating, and altogether exasperating as a business proposition individually, as a team, under National guidance working to a set plan, he looks like beating the world.

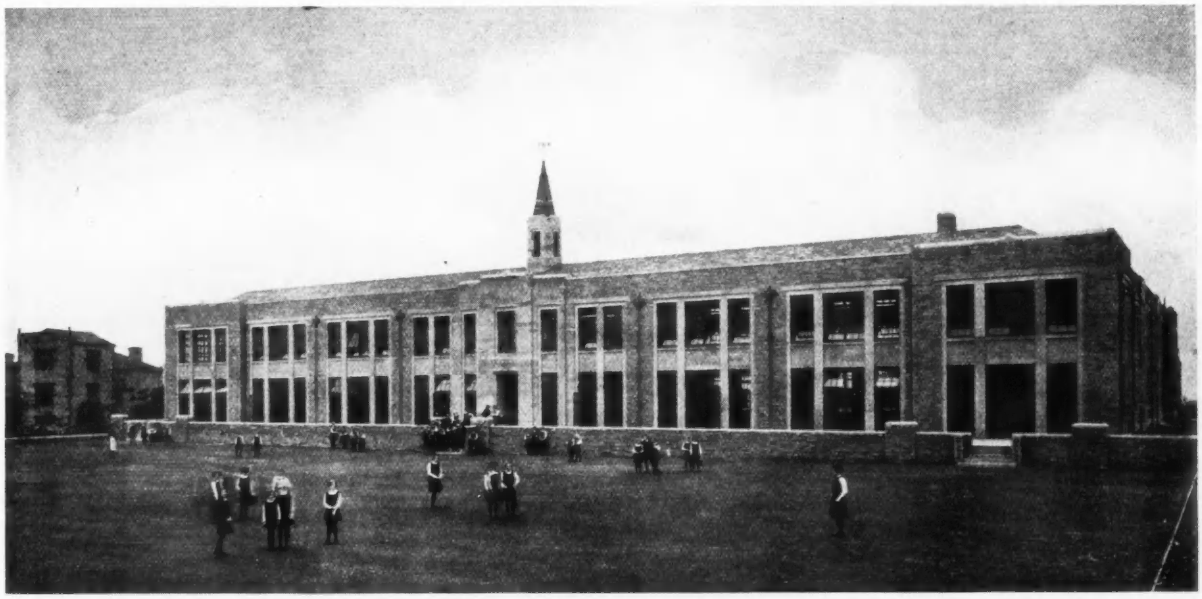
Extracts from a lecture read before the Architectural Association on Monday last.



A section of one of the new housing estates, Moscow, undertaken as part of the Five-Year Plan, referred to by Mr. Clough Williams-Ellis on this page.

BOLLING HIGH SCHOOL FOR GIRLS, BRADFORD

DESIGNED BY W. WILLIAMSON (*City Architect*)



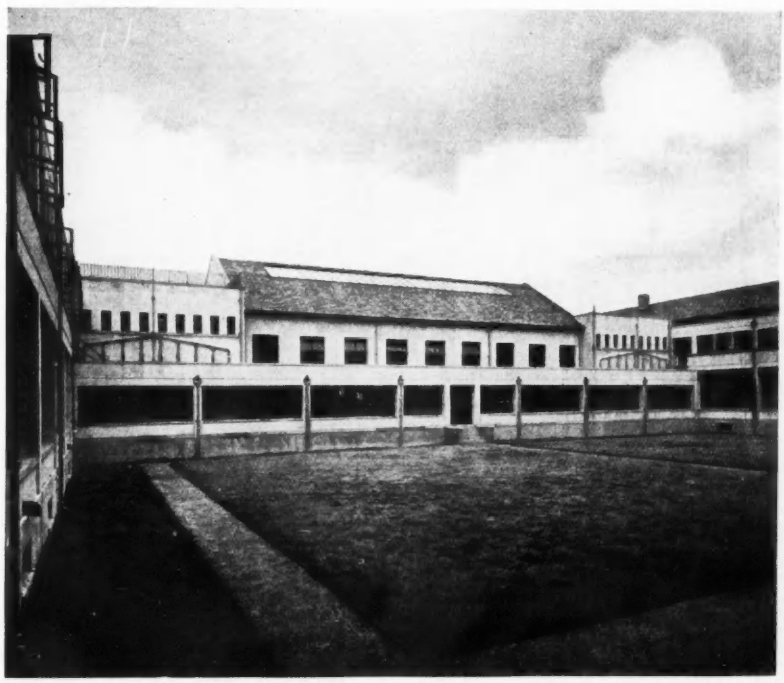
A general view of the main front, showing part of the old Bolling Hall, which adjoins the site, on the left. The walls are of local bricks, with snecked wallstones, varied in colour, and with boasted stone dressings. The roof is covered with thick rustic-red and green Old Delabole slates, laid to graduated courses. Wood casements are fitted.

THE completion of the Bolling High School for Girls, Flockton Road, Bradford, on a site adjoining the historic Bolling Hall, has met a long-felt need for secondary school accommodation in the southern area of the City.

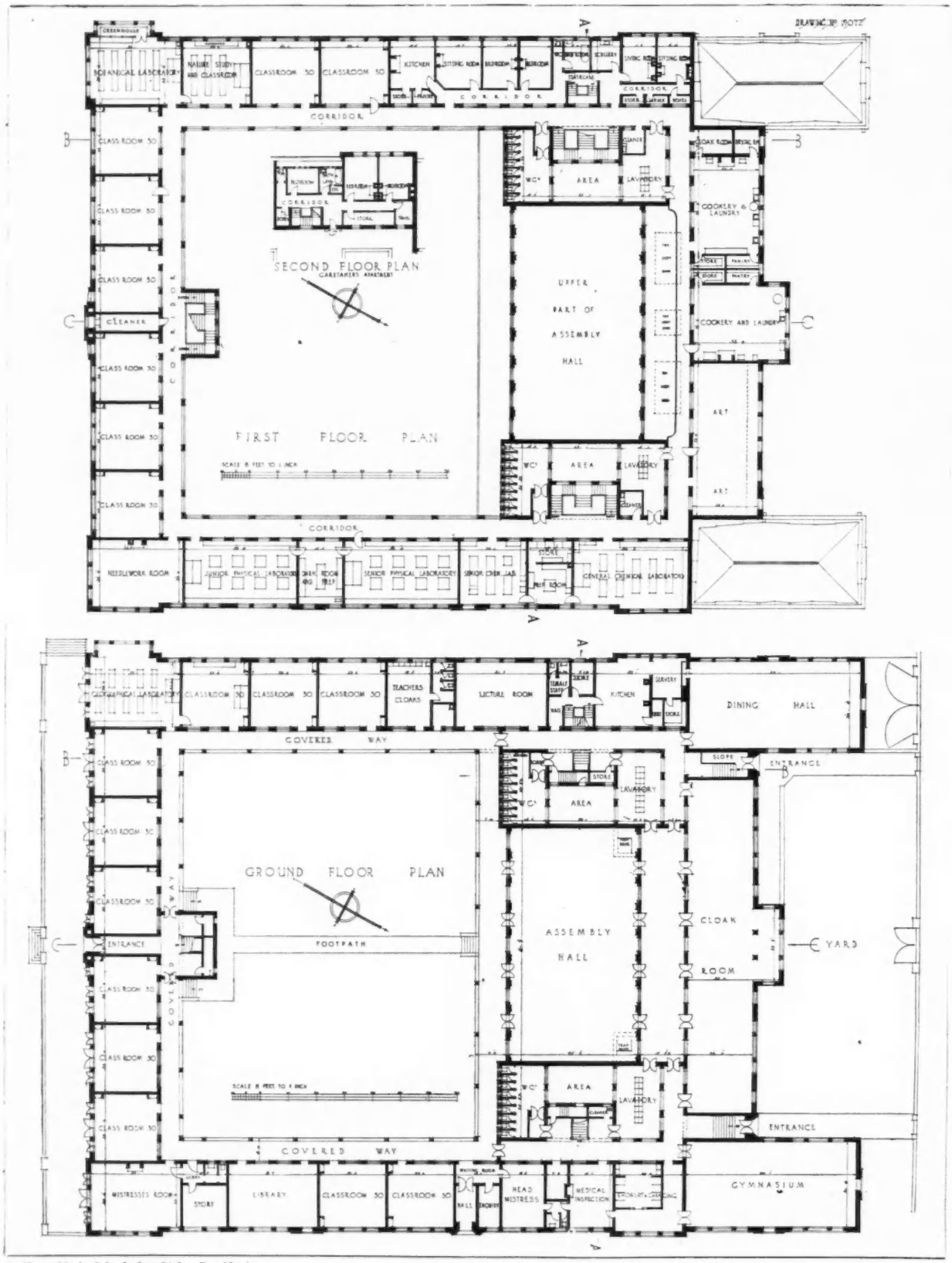
The school has been planned in the form of a square, the classrooms being grouped in two stories round three sides of a quadrangle, with an assembly hall, providing seating accommodation for 600 persons on the fourth (north) side. The planning of the hall has been given special attention by the architect, both as regards its general proportions and treatment. It is situated in close proximity to the scholars' entrances from the north side and the cloakrooms; and is also conveniently placed in relation to the entrances from Flockton Road, the head mistress's room and inquiry office.

In addition to the classrooms, the accommodation includes junior and senior laboratories for physics and chemistry, with the necessary stores and preparation rooms; a botany laboratory with a junior "Nature Study" room adjoining a specially fitted room for geography; and a balcony for meteorological observations; a library with provision for private study; a lecture room suitable for lantern lectures or music practice; a large art room with north light; an art crafts room in which the girls will be taught the modern light home-crafts; a domestic science section with provision for the teaching of cookery and laundry; a housewifery flat with two bedrooms, dining-room, and kitchen complete; and at the sunniest corner on the first floor, a room for needlework; and a gymnasium, with dressing-rooms and shower baths attached. In addition, there is a large school dining-room with separate kitchen and servery.

Adjoining the buildings on the south are hard tennis courts, with a terrace on the school side, and, farther away, pitches for hockey, net-ball, and other games.

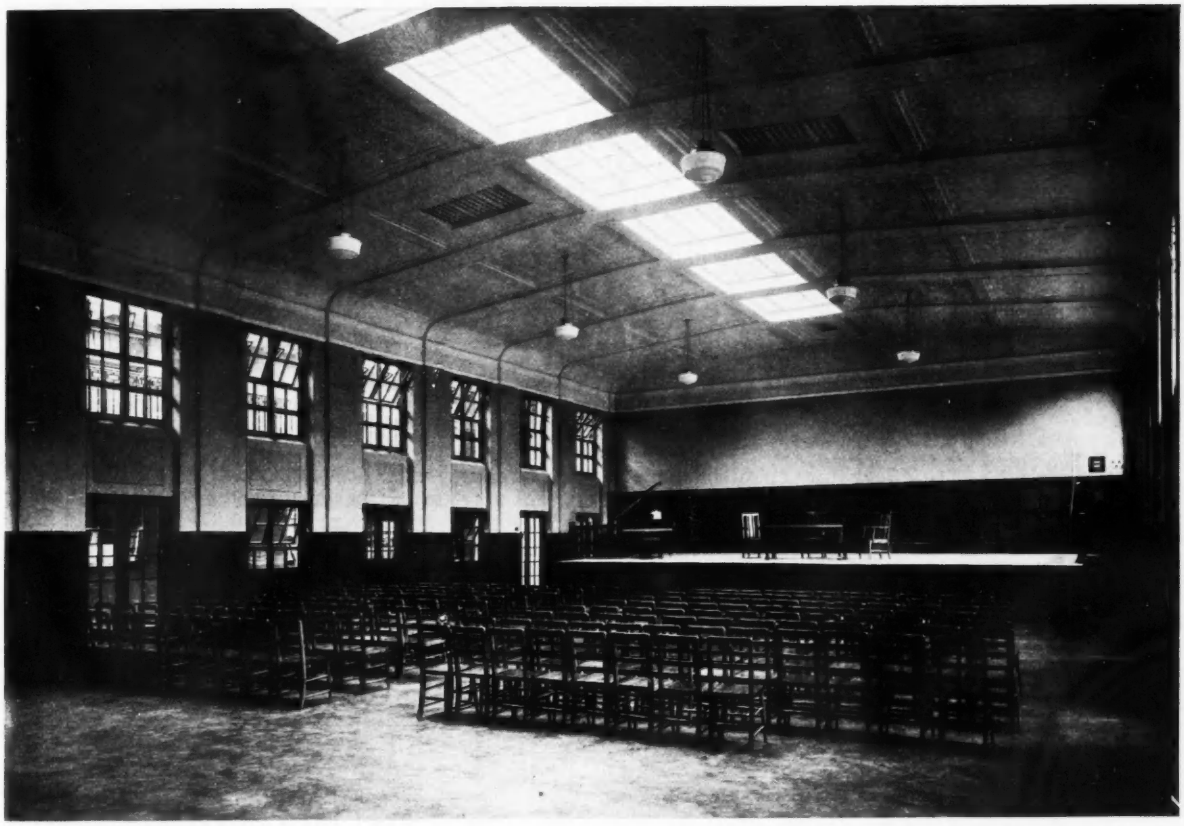


Looking across the inner quadrangle towards the entrance to the assembly hall. The walls have been faced in white cement, a wood float being used to finish the surface.

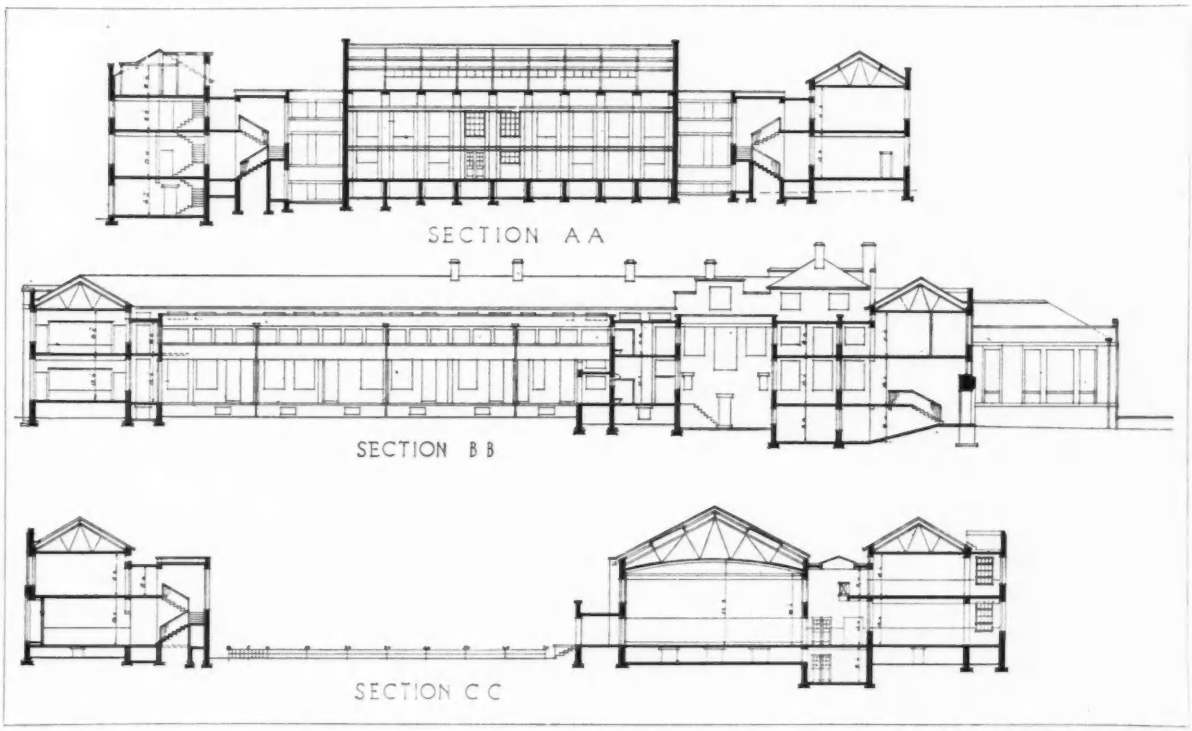


Bolling High School for Girls, Bradford.]

Ground, first and second floor (devoted to the caretaker's apartment) plans. The classrooms are grouped in two stories round three sides of the inner quadrangle, on the fourth side of which is the assembly hall. A footpath connects it to the main entrance.



The assembly hall, which runs through two stories, provides seating accommodation for 600 persons. The walls are panelled in oak, and plastered above; and the floor is laid with oak wood-blocks. The ceiling is slightly curved and has been formed into a series of panels, with a central ceiling light. The stage is a permanent fixture.



[*By W. Williamson (City Architect).*

The architect's cross sections A–A, B–B and C–C, which should be studied in conjunction with the plans reproduced on the facing page. Wallboard panels have been introduced into the ceiling and frieze of the assembly hall for acoustical purposes.

PLACES FOR RECREATION

BY J. MURRAY EASTON

MR. J. MURRAY EASTON, F.R.I.B.A., in delivering the fourth of a series of public lectures, organized by the Architectural Association, at 36 Bedford Square, W.C.1, on Saturday last, said recreation was the indispensable complement to industrialism, and to provide adequate facilities for recreation was one of the most urgent social problems of today.

Evils of Mass Production

Mass production, while it held out for us hopes of an era of plenty and of leisure, threatened also boredom and discontent. We could very easily have an inferiority complex in face of machines, for it was not difficult to feel that there was almost nothing a machine could not do better. Hence it was of prime importance for everyone to have the chance of some activity in which the doing of things counted for more than what was done.

Only a few years ago we in this country had an unshakable belief that we were the only nation that really played games and took enough exercise. Now we all knew that our best players in nearly every game had been beaten by those of other countries, but he doubted whether most people realized the extraordinary advance that had been made on the Continent—in Germany particularly—in providing widespread facilities for public recreation. This country had a very big start, and in many ways it still led. No city in the world, he supposed, had quite the extent and variety of open spaces in and around London, but in the industrial areas of the Midlands and the North things were very different. But it was above all in the convenience, order and seemliness of its playgrounds that Germany could teach us a lesson, and so, without any intention of decrying our own achievements, he was going to deal largely with what had been done of recent years on the Continent.

J. Murray Easton, F.R.I.B.A., author of the paper reported on this page.

The Stadions of Germany

Every German city that he had visited had prepared a plan of development that included the provision of open spaces, play centres, baths, etc., for children and adults. Ground was earmarked for the purpose and, if not available at the moment, was acquired when the opportunity occurred. The culmination of those centres was the stadion, which consisted of a group of stadia, a ground for the various sports, and generally included an open-air swimming pool, tennis courts and a restaurant. Those grounds were used for the more important matches and athletic events, and they provided a certain amount of accommodation for spectators, but not generally of the same extent as were English football grounds. At Frankfurt, which possessed one of the most magnificent stadions in the country, there was no space for spectators around the swimming pool. All the extensive space round it was reserved for the users, who had ample room to play and obtain the benefit of the sun or light baths.

It might be thought that such places were not really the concern of architects. A field was the principal ingredient of them all, from the simplest to the most elaborate. Even then the architect, as town planner was concerned from the first. That it should be in the right place, be part of a considered scheme, that it should be so fenced, planted, equipped with partitions for spectator accommodation as to be an asset to the neighbourhood, not an eyesore—these were things that architects did concern themselves with.

In conclusion, he said, we wanted in this country to have more and better conceived schemes for places of public recreation, and the very highest skill was not too good to apply to this object.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Bill for Prevention of Dumping

GENERAL satisfaction is felt among the supporters of the Government at the passage of the Abnormal Importations Customs Duties Bill, which, it is hoped, will prevent much of the dumping which has been going on during the past few weeks.

The measure provides that "if the Board of Trade are satisfied that articles of any class or description comprised in Class III of the Import and Export list issued under the authority of the Treasury and the Commissioners of Customs and Excise for the year 1931 are being imported into the United Kingdom in abnormal quantities," it shall be lawful for the Board, with the concurrence of the Treasury, by Order to impose duties on these articles up to a limit of 100 per cent. of their value. The measure is to last for six months, and Empire goods are to come in free of duty.

The articles specified in Part III, "wholly or partly manufactured," are as follows :

Coke and manufactured fuel; pottery, glass, abrasives, etc.; iron and steel and manufactures thereof; non-ferrous metals and manufactures thereof; cutlery, hardware, implements and instruments; electrical goods and apparatus; machinery; manufactures of wood and timber; cotton yarns and manufactures; woollen and worsted yarns and manufactures; silk and silk manufactures; manufactures of other textile materials; apparel; chemicals, dyes, drugs and colours; oils, fats and resins, manufactured; leather and manufactures thereof; paper and cardboard; vehicles (including locomotives, ships and aircraft); rubber manufactures; miscellaneous articles, wholly or mainly manufactured.

The value of Class III imports during the past three years has been as follows :

	1929.	1930.	1931.
	£	£	£
October	30,173,095	27,715,299	27,248,715
Ten mos.	278,442,312	262,101,321	215,099,350

Special figures compiled by the Board of Trade show that in the ten days following the period included in the returns for October of this year the value of the imports under Class III was £14,158,373.

Debates on Dumping

In the debates which have taken place on the subject, Sir Henry Page Croft stated that in the first eight months of 1924 we imported 4,000,000 bricks. In the first eight months of 1931 we imported 137,000,000 bricks. That was an increase of 3,300 per cent., a very serious matter for the workers of this country. We were quite competent to produce bricks ourselves.

Mr. Runciman, the President of the Board of Trade, said that the measure was an emergency one, designed to prevent forestalling while the Government were framing a larger scheme.

ARCHITECTURE AND DECORATION

BY HOWARD ROBERTSON

THE great styles of architecture were all modern in their day, all significant. Social changes helped transitions; but the greatest changes of form coincided with the most far-reaching developments in structure: Greek, Roman, Byzantine, Gothic, all marked by their own phase of structure. And then came the grand summary of the Renaissance, employing all phases, followed by a reversing of the wheel of development through a period of revivals, until we returned to pseudo-Greek.

A New Period in the Making

Today, another period is in the making. History will find the label. The phase of structure is still developing: starting with cast iron, and working through steel and concrete, we are not sure whither. The all-metal building is on the horizon. One is being built in Chicago, with walls, floors, partitions all of metal, lined with insulation. One of our structural problems has been the large dead weight of walling, still in brick and stone, carried by the steel of big buildings. The tallest building in the world, the Empire State Building, has to carry 14 tons of dead weight for each one of its 25,000 inhabitants. The average weight of a square foot of wall on a skyscraper is 150 lb. to the square foot. The walls of the new metal building will only weigh 121 lb. to the square foot, and there will be a great saving of space as well.

Treatment of City Roof-tops

One of the problems which we have not yet had to face is the treatment of our city roof-tops. In New York, with towering buildings and innumerable "set-backs," the view over the roof is important; and in Radio City, containing the largest office building in the world—a scheme sponsored by John D. Rockefeller—the roofs are being laid out in gardens, with planting, trees and even a 90-ft. waterfall.

One of our peculiarly English problems in big cities, like London and Manchester, is the present change of scale. Our civic scale, relative to the Continent, has been habitually small. We have developed a charming domestic and street architecture of small scale, and today our national style is a really pleasant free version of a friendly Georgian. But it is a style with limitations. We twist and turn between Georgian and Italian Renaissance, or Neo-Classic, in the effort to find a solution to the design of big commercial buildings. And we cannot do so, because solution does not lie that way. For big modern commercial work we must seek new formulæ and build up a fresh tradition, like the fine old traditions, based on requirements and structure. The start is made, but progress is hesitating.

Buildings and Advertising Value

People say today that most big modern buildings present a fresh and difficult problem, because they have to serve not only as shelter, but as advertisement. But in all periods buildings have served, in their way, as advertisements. Was not the Parthenon the sign of a cult, the Colosseum an advertisement for the popularity of emperors, Chartres Cathedral a striking symbol of religion? And today we have buildings as symbols for trade, advertisements for commerce, transport, amusement. Our task is to advertise in comely fashion, and in this the client must be willing to co-operate.

Comparison with Other Countries

Compared with countries like Germany, Holland, France, England suffers from lack of co-ordinated architectural ideals. For the last hundred years or more it has been a case of each man for himself; individuality, and too often individuality untrained and amateurishly unfit to express itself in building. Witness the architecture of nine-tenths of our streets. The great boon of the recent floodlighting of our big cities was the emphasis on our best buildings, and the blotting out of all the rest. Darkness hid for a moment our architectural sins, and gave glimpses of ideal cities.

Expression of Building Requirements

Until there are in England greater mass movements towards an agreed goal, with a greater agreement as to what is fundamentally important in the expressing of building requirements in terms of form and detail, we will fail in dignified street architecture. We are groping now; whereas the process of research into fundamentals of design and of constructive experiment has been going on for years past in many Continental countries.

In domestic architecture and decoration change is on the horizon. The expression of form, and decorative treatment, may modify itself slowly as ideas alter in respect of the utilization of the space within the house, and the service expected from such elements as windows, doors, fireplaces, etc. The day may come—it is already announced in German experiments—when interiors will be divided less into regular rectangular compartments of rooms, and will consist more of large spaces broken up by walls treated as screens, with curtains instead of doors, except to private apartments and kitchens.

Popularity of Glass

One large area will be so planned as to provide living space and nooks for dining, reading, and so on. And bedrooms, fitted like those of a yacht, will be sacrificed in size to the benefit of the living-room. Bigger areas of glass will probably become and remain more popular. But, to ensure privacy, placing and outlook of windows will be more closely studied, and plans will probably be of the type which can most easily be covered with flat roofs.

The house on stilts, with only the garage and store rooms on the ground floor, has also great possibilities. In town, as in the country, the high level of the living floor opens up splendid possibilities for terraces and loggias secluded and yet commanding in their views.

Furnishing and Decoration

The problem of furnishing and decoration is slow to be solved. Our furniture, even if modern in shape, is not truly modern in its planning and design for use. Desks, sideboards, dressing tables, cupboards have internally the same old defects. They are built, but not planned. Few makers have thought to design for the cramped spaces of today. And few decorators have realized how to create in form, colour, and reflections, the illusion of amplitudes.

Howard Robertson, F.R.I.B.A., author of the paper summarized on this page.

Summary of a lecture on "Problems of Architecture and Decoration," given by the author at a meeting of the West Yorkshire Society of Architects on Thursday last.

COMPETITION FOR TUBERCULOSIS HOSPITAL, SULLY, NEAR CARDIFF

Winning Design : By William A. Pite, Son and Fairweather

Elevation facing the sea. A footpath runs along this side of the site. It was stipulated that the buildings should be placed at a sufficient distance from this path to ensure privacy, and that no part of the buildings should be within 200 ft. of it.

AS announced in last week's issue, Messrs. C. E. Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A., the assessors of the competition for the tuberculosis hospital, Hayes Farm, Sully, Cardiff, for the King Edward VII. Welsh National Memorial Association, made their adjudication as follows :

First premium (£400), William A. Pite, Son and Fairweather, FF.R.I.B.A.

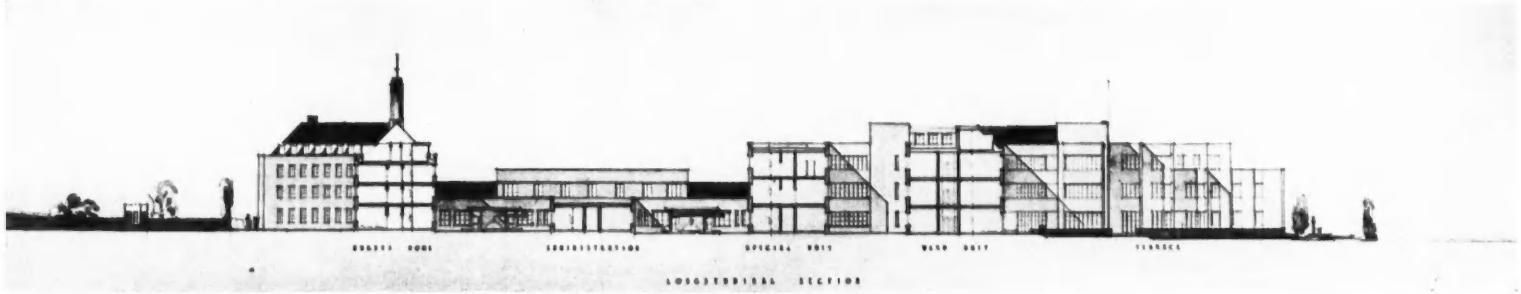
Second premium (£300), Lanchester and Lodge, FF.R.I.B.A., in association with Ernest E. Davies, A.R.I.B.A.

Third premium (£175), Stanley Hall and Easton and Robertson, FF.R.I.B.A.

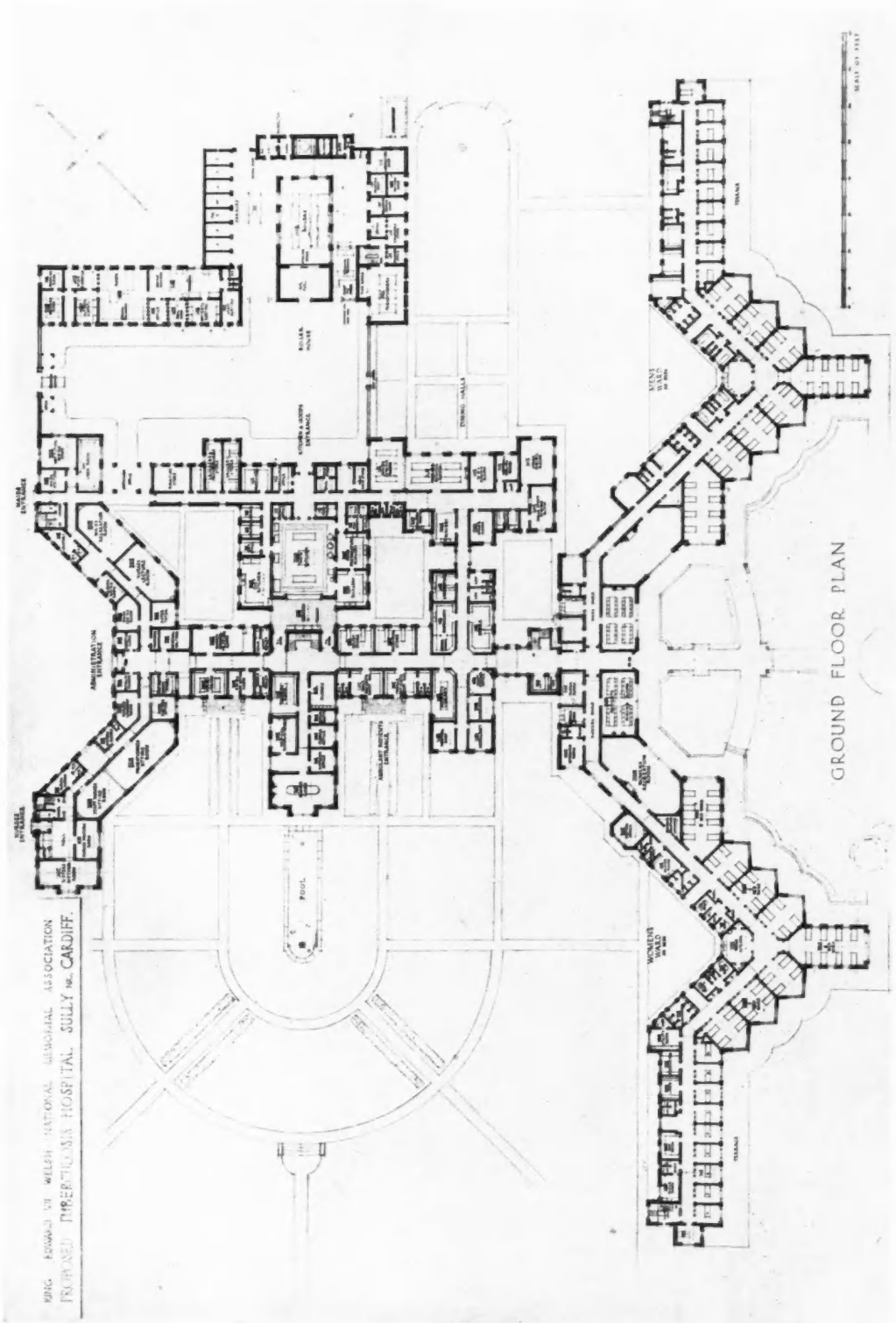
Fourth premium (£100), Todd and Thompson, A.R.I.B.A.

It is stated in the conditions of the competition that the Association intended to erect on a site of approximately 22½ acres, facing the Bristol Channel and flanked by existing belts of trees on the north and west, a hospital for the treatment of patients suffering from pulmonary tuberculosis. The hospital was to accommodate 250 patients, with provision for an additional fifty if the need arose. It was stipulated that the main approach should be from Hayes Road to the north of the site (see block plan), the approach avenue being laid in from the road more or less parallel with the north-west estate boundary. It was further emphasized that the outlook over the sea required consideration, so as to avoid glare from sea-shine and sun-shine. The buildings erected were to be arranged and constructed so as to offer protection for patients with rigid chests and heart and kidney complaints, so that the varying meteorological conditions might not be unduly felt by them.

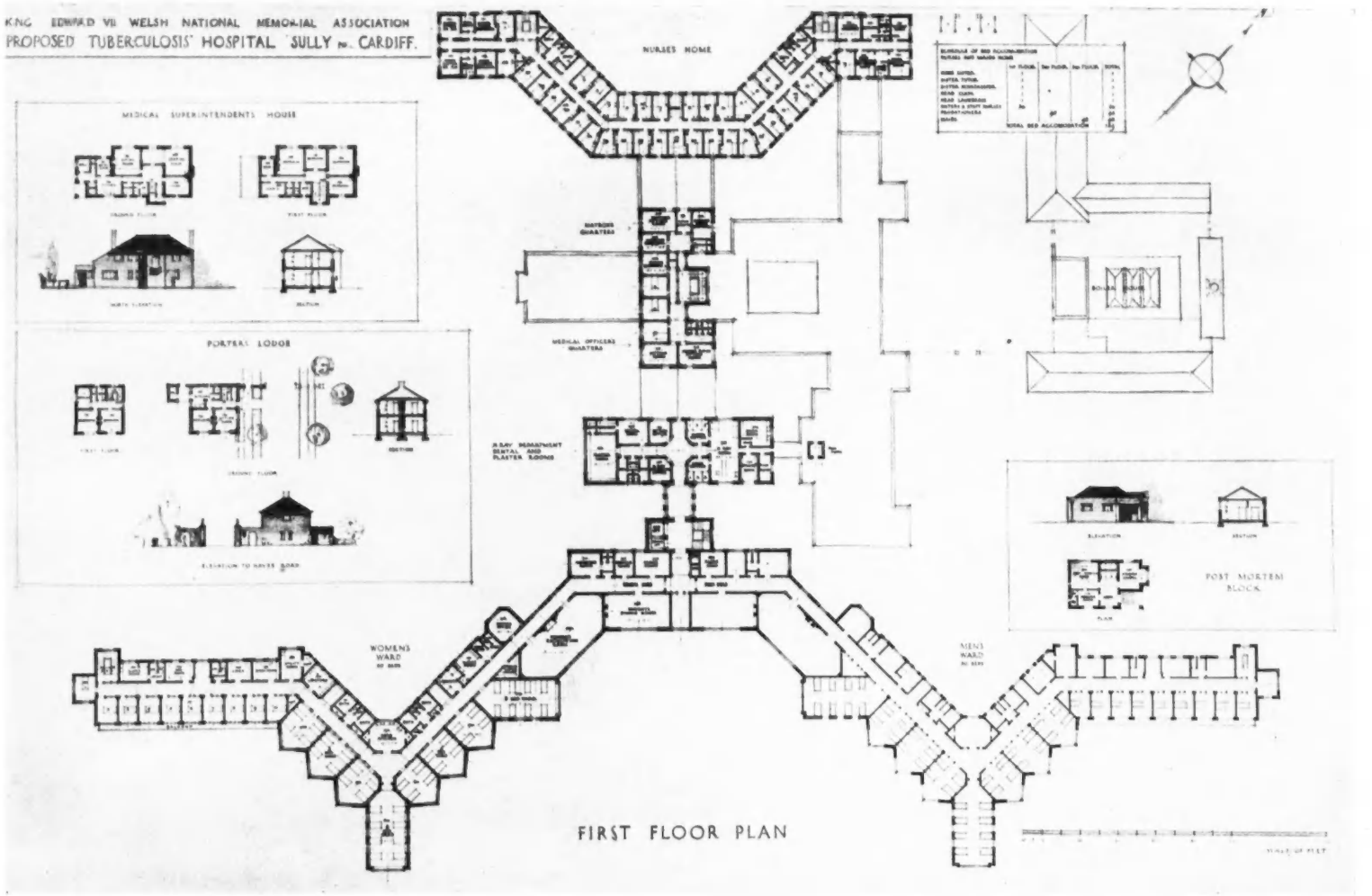
The assessors, in their report, state that forty-six sets of drawings were submitted by forty-five competitors, one set being evidently an alternative design. The estimated cost of the schemes submitted varied considerably, from £122,462 to £229,014.



Longitudinal section. Reading from left to right, are the nurses' home, administration block, and special and ward units. An entrance for ambulant patients has been provided in the centre of the administration block. The approximate cost of the scheme is £156,969, which, if the proposed extensions are executed, will total £165,188.

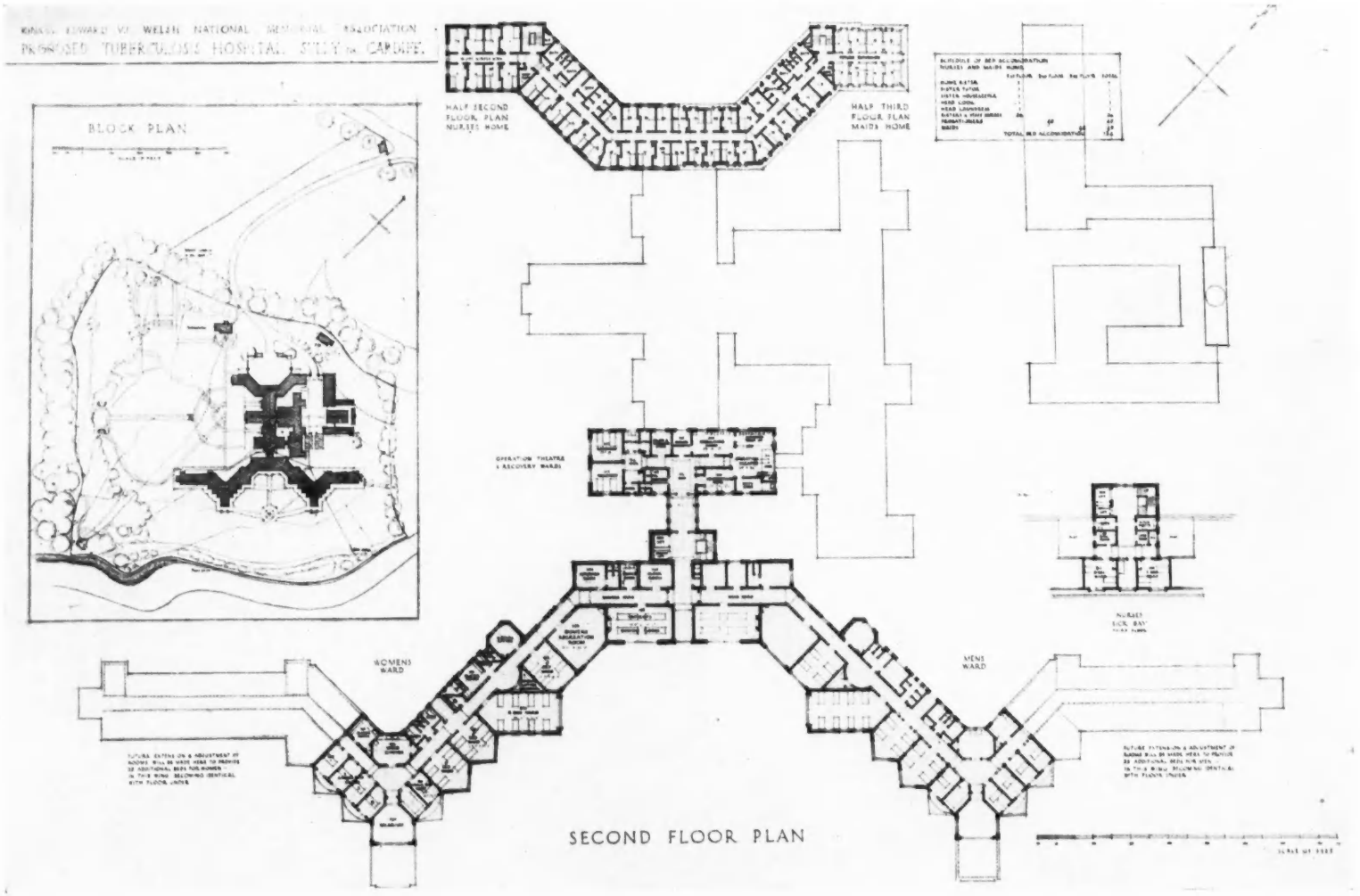


Ground-floor plan. There is a central corridor providing access to practically the whole of the accommodation on this floor. At the south-easterly end of the corridor are the entrances to the women's and men's wards. Both provide accommodation for twenty beds. The men's and women's ward units include recreation rooms, dining-rooms, offices, cloakrooms, etc., and there is a terrace running round them on the south-eastern side.



The architects' drawings of the first-floor plan; with plans, elevations and sections of the medical superintendent's house, porter's lodge and post-mortem block. The nurses' and maids' home provides total ac mmodation for 134 beds. The women's and men's wards also provide accommodation on this floor for fifty beds each. The medical superintendent's house is placed at the north-west corner of the site and contains living-room, dining-room, kitchen, study, etc., with, on the first floor, four bedrooms, two maids' bedrooms, bathroom and other necessary accommodation. The porter's lodge, containing living-room, parlour, kitchen, three bed rooms, etc., is situated at the entrance from Hayes Road.

TUBERCULOSIS HOSPITAL, SULLY, NEAR CARDIFF



Winning Design.] [*By William A. Pite, Son and Fairweather.*

Block and second-floor plans. It will be seen that the architects have provided for future extensions for the women's and men's blocks, each to accommodate twenty-five additional beds, eventually becoming identical in plan with the floor below. Competitors were asked to note particularly that "the building is not a *sanatorium* in the sense that this word is popularly understood. A cheerless and comfortless arrangement for tuberculosis wards is not desired, and stress is laid on hygiene combined with comfort. 'Pure air' treatment for patients is in this case a better designation than 'open-air' treatment."

LETTERS FROM READERS

"Bernard Whistlow, F.R.I.B.A."

SIR,—Now that "Bernard Whistlow, F.R.I.B.A.," has reached a sad but inevitable end, and Mr Towndrow has written his sad, inevitable letter, I would like to offer my doubtful solution :

I appreciated Bernard as an honest, sober and hard-working business man, and felt that he had made a success of his life—that is, he got what he was working for.

Mr. Creswell, however, must pardon my slowness if I had failed to grasp the fact that Bernard Whistlow was an architect—I realized that his business was connected with building, but thought that Mr. Creswell was depicting the perfect commercial traveller.

I should like to employ him.

HAROLD GREENWOOD

"Bernard, the Socially Sodden"

SIR,—When, some months ago, a correspondent to your columns referred to Whistlow as "Karshish's hero," my feathers all stood on end; but when Mr. Frederick Towndrow tells you he finds Whistlow to be a poor sad lot, a palpitating, curmudgeonly, tuft-hunting worm and socially sodden, they do not. Mr. Towndrow is, of course, merely measuring himself against Whistlow; for Whistlow remains the Whistlow we all know, and Mr. Towndrow is only telling us how he reacts to Whistlow, and in thus revealing his inability to assess values in life, Mr. Towndrow gives the clue to his fantastic assessments—as they seem to me—of architectural values.

Tchekov, in a letter to a friend who had charged him with being too strictly objective in his plays and stories, says, in defending his position, that the author who reveals his own prejudices by indicating his views of his characters and their actions, offends the reader as though he should display to him his naked foot. That illustration rams home an elementary principle of artistry in fiction-writing; and though I do, on my conscience, write with a deep sense of responsibility lest I should seem to recommend what I abhor or slight what I esteem, Bernard Whistlow's autobiography is an exact picture of life as I have experienced it within myself, and a true, if not entirely a literal one, in its episodes, and is coloured by no subjective purpose. I have been careful to avoid satire—great as the temptation to me always is—because my purpose is sincere, and facetiousness would impugn sincerity; but it is, by a curious paradox, those very precautions I have taken to remove any implications of satire that have, apparently, suggested a satirical motive to Mr. Towndrow. If I had allowed Whistlow to make his confessions, unaware that his actions invited adverse criticism, or even unconscious of his motives, satirical colour would have been latent in the narrative, but the challenge Mr. Towndrow makes would not, in that case, have been invited.

Whistlow, however, in the light of greater experience, writes of his past in full consciousness of the meanness of his aspirations and the falsity of the manœuvres by which he sought to accomplish them. This is greatly to Whistlow's credit, as it is to Mr. Towndrow's credit that he so detests Whistlow's social and professional climbings. It is also to be noticed that when Whistlow does particular violence to our self-respect, the pungent voice of Garston—who, I need hardly say, is the man for my money and the "hero" if the story holds one—re-establishes it.

Mr. Towndrow has the happiness to be young; but his position on the foothills of life disallows him that wide view which is the possession of those who have travelled farther and reached the vantage-point of higher ground. I think, however, that if he applies himself to a study of his own conscience—like the philosophers who of old sought the apocalypse of nature in their own bodies—and uses his observation in the light of the knowledge so acquired, he will cease to think Whistlow—who, in his simplicity, accepts the conditions of life in which he finds himself—is the abnormal person he now supposes, or that, as an architect, he is moved by different springs than those common to men in other professions and callings.

Does Mr. Towndrow suppose that people give dances and dinner- and house-parties to gratify a desire to entertain and give pleasure to their friends ? Is it the necessitous who are sent presents of game and offered shooting and salmon-fishing; or is it those who have well-stocked larders and fishings and shoots of their own ? Does he suppose that private social functions are other than evidences of keen, and even bitter, competition; or ever consider what the prizes in that competition are ? Has he ever tried to imagine what the mind—and soul—of "a famous hostess" is like, and what her idea of happiness is ? Why, I ask him, must a doctor have a showy car as formerly he aspired to a well-set-up carriage and pair; and why does the generality of all conditions of men strain their resources to maintain showy establishments ? What is the meaning of *parvenu*, and what methods does he employ, and to what ends and for what motives ? What is the general application of the maxim "Nothing succeeds like success," and why is it that those uttered by Whistlow's wife are not merely true but even trite ?

I ask him these questions, but I hope to goodness he will not answer them in print.

Poor Whistlow, in his single-minded, naked conflict with life, in which he has no guidance but his own experiences, is merely responding to vital instincts that are common to all men; but, unlike many men, he is no hypocrite, for he regards his machinations as a "game," and never disguises from himself, as the majority of Garston's tom-cats do, the meanness and falsity of them; and he also fully realizes the improbability of reconciling himself to such a way of life, and acknowledges this last of many errors with bitterness. "It pays an architect to have his front teeth knocked out," he comments. It seems to me that Whistlow's scorn is even greater than Mr. Towndrow's; and, Tchekov notwithstanding, is there any doubt of *my* views in the matter ?

H. B. CRESWELL

P.S.—Mr. Harold Greenwood's letter, which I have seen since writing the above, tells us how Whistlow strikes a boy who has just left school. I do not disparage that statement—I wish it were mine; but I think it possible that our difference of view may arise from the circumstance of my speaking after a considerable experience of professional life, and Mr. Greenwood before he has had any at all. He will not mind my chaffing him, for it was he who started the game. I hope he will hold to his beliefs and not, like Whistlow, be led unconsciously into drifting with the stream and live to regret lost ideals—or, worse, live never to regret their loss, from the early-formed habit that avoids recognizing motives which are irreconcilable with ideals. The commercial traveller is innocent of any such hypocrisy : he at least is an honest fighter, out simply to do the other fellow in the eye by fair means or foul, or be similarly done in the eye himself. If Mr. Greenwood, in fifty or sixty years' time, turns up his letter and is led to the reflection that the practice of architecture has, for him, been a dirtier game than the bagman's, he cannot lay the blame upon me nor upon Whistlow. He has been fairly warned, and at a peculiarly impressionable time of life.

H. B. C.

THE SPECIFICATION WRITER

Economical Hospital Construction

BY SIR G. T. BEATSON

IN Germany, prior to the war, preference was being given to the central-corridor plan with its one-story bungalow in the erection of large hospitals. For instance, in the case of the Rudolf Virchow Krankenhaus for 1,000 beds, which was completed in 1914, the hospital was laid out with a number of single-story pavilions, which could be immediately duplicated should occasion arise, and that without any increase in the administrative buildings or in the general services, such as water supply, heating and electricity. In Germany it was felt that this plan was conducive to rapid building, quick extension, and, above all, economy.

Cambridge Hospital

When the Great War broke out, and Cambridge decided to erect a large general hospital, it selected the central corridor and bungalow type of building. In the spring of 1915 the Scottish Committee of the Red Cross Society realized the possibility that a prolonged war might have to be faced, and resolved to erect a large general hospital that would take its place in the first line of military hospitals in the organization laid down by the War Office. It was necessary that such a hospital should be built quickly and economically, and that it should be capable of expansion in case of need. A small committee was sent to Cambridge to inspect the war hospital there, and the result of this visit was that they recommended the adoption of the central corridor plan, with the single-story wards leading off each side of the corridor, but with the introduction of some small changes to meet our different climatic conditions.

Bellahouston Hospital, Glasgow

Through the kindness of the Glasgow Corporation a site for the hospital was furnished at Bellahouston Park, and, after some preliminary levelling had taken place, the construction of the hospital was put in hand. At this time building materials were scarce, and, an alternative method of construction having to be chosen, the selection fell upon asbestos sheeting. By using this and by adopting the bungalow plan with its single stories, thus doing away with lifts and stairs, the cost of erection and of future upkeep was lessened. Rapid building was also facilitated, and the hospital structure was practically completed in three months.

The Hospital's Equipment

Provision was made in the hospital for the reception of patients, operating theatres, curative baths, capacious rooms for radiant heat, electricity, and massage—the last with physical apparatus. Around the hospital were arranged, separately, a pathological department, a block with isolation wards, blocks for doctors' quarters, nurses' quarters, administration, and other blocks, as for the kitchen, orderlies' quarters, recreation room, etc. Later on a building for orthopædic curative workshops was put up.

The hospital began with beds for 500 patients, and the ease with which it could be extended was illustrated by the fact that, subsequently, that accommodation was increased to 1,200 beds by adding seven additional blocks, and this without the work of the hospital being interfered with. So expeditiously were the building and equipment carried out that in October, 1915, the hospital was ready for patients, and was then formally opened.

Central-Corridor Plan

Reference to the adjoining plan will show the position of the central corridor running north and south, with one-story bungalow wards opening off it on each side, there being sufficient space between the wards to allow of the beds being wheeled out into it, so as to let the patients have the benefit of the open air and sunshine. Each ward held fifty beds, and was complete in itself, having six small rooms at the end nearest the corridor—one for the sister-in-charge, two for special cases, one for clerical work, one as a linen-room, and one as a ward kitchen with a larder opening off it. At the other end of the ward each block had its own sanitary arrangements, which were completely shut off from the ward by a short passage with cross ventilation.

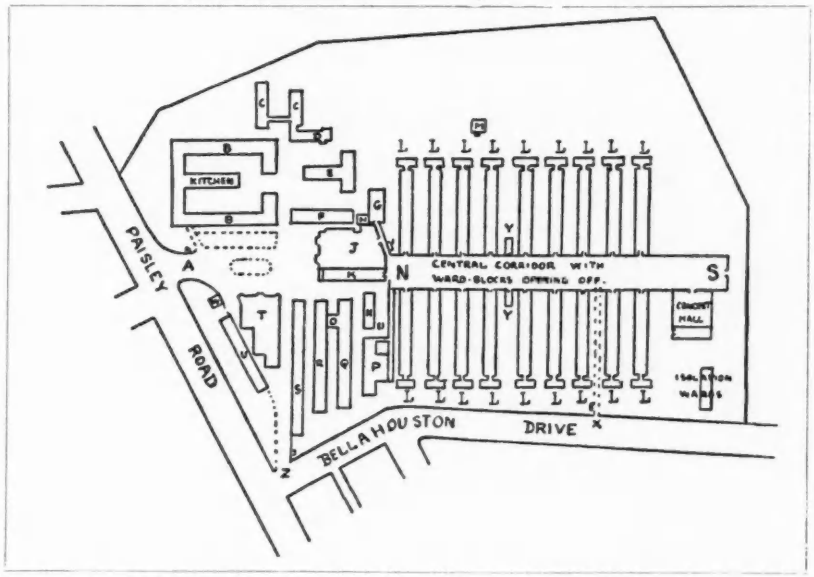
It will also be quite apparent from the plan that the central corridor lends itself readily to expansion of the hospital by extending it southwards, and so allowing the addition of extra wards. Further, the central corridor gives two entrances to the hospital—one at the northern end for members of the staff and the admission of patients, and another at the southern end for the friends of patients. An exit was provided at the southern end for access to the grounds of the hospital, and, subsequently, there was also built off the corridor a large concert hall for entertainments.

An Educative Factor

The Glasgow Herald of January 7, in its editorial diary, intimated that Bellahouston Hospital had been evacuated, and attention was drawn to, and emphasis laid on, the fact that it had served notably its day and generation. The hope was also expressed that, though it would soon pass into oblivion, its story should be preserved in some form or other. This outline of the hospital to some extent should do this. Besides the great service that Bellahouston rendered to 15,000 sick and wounded in the Great War, it supplied valuable lessons in hospital construction, in hospital co-operation with county auxiliary hospitals, and in finance.

As one of our leading medical journals said, these lessons would amply repay further study, as they should now be of great service to our voluntary hospitals at a time like this, when their position in all the above three matters is far from satisfactory and is seriously compromising the suitability of that voluntary principle which it is so desirable should be retained.

Bellahouston Hospital has, undoubtedly, been an educative factor on the points mentioned above, but



Layout plan of Bellahouston Hospital, Glasgow, now evacuated, a typical central corridor, one-story bungalow design, the economies of which, in construction and upkeep, are emphasized in the accompanying article.

markedly so in introducing into Scotland the central corridor and bungalow type of building, and in having given it a thorough trial from which it has emerged most successfully.

It is well to draw attention to this modern type of construction, and it is not unreasonable to hope that the twentieth-century hospital should adopt it, recognizing that it is rapid in construction, easy of expansion, not costly in upkeep, gives a good return in accommodation for the money spent, and, above all, is economical. With its 1,200 beds Bellahouston Hospital cost £100,000. While it does not claim originality for the central corridor and bungalow system, but only for its introduction into Scotland and for demonstrating its value and usefulness, the memory of the hospital might very properly be perpetuated by calling this mode of construction " the Bellahouston central corridor system."

In a recent notice, *The Lancet* spoke of Bellahouston Hospital as " the Great War hospital." It was so in two senses —the Great War called it into existence, but it was great also in the work it did and in the valuable hospital lessons it supplied, and that entitled it to well-deserved recognition.

[The foregoing article is reprinted from *The Glasgow Herald*.—ED. A.J.]

COLOUR IN INTERIOR DECORATION

THE point of view of Mr. Holmes's book,[1] which has been admirably printed and bound by The Architectural Press, is well expressed by the quotation which he prints on his title-page :

" If knowledge alone be insufficient to form a good colourist, it must at least prove useful in explaining the causes of failures and in suggesting the conditions of success."—(A. H. Church, 1901.)

With so modest an outlook Mr. Holmes prefaces a book which is devoted to the very lucid exposition of a simple theory of colour, developed out of his knowledge of the practical problems of decoration, and applied to a series of examples which are good proof of the value of his theory.

Although it is quite clear that some of the best colourists are not acquainted with any colour theories and produce schemes instinctively, it is none the less invaluable for them to be able to analyse the means by which their ends are achieved, and it is still more valuable for the great mass of designers, who work haphazardly and experimentally, to be able to direct their labours in accordance with a theory such as that put forward by the author of this book.

Concerning himself with the pigments, which are the decorator's medium, Mr. Holmes has produced a colour disc with a circumference of twelve " primary " colours, the centre of the disc being neutral grey. An infinite number of these discs can be produced according as the general tone of all the colours varies. This primary circle is the basis of Mr. Holmes's discussions of contrast, harmony, monochrome, neutralization and discord, which colour relationships are each examined by reference to appropriate plates.

It is not my intention to give a *résumé* of the subject-matter of the book, which can only conveniently be studied with the colour drawings at hand.

Apart from the principal theory propounded, Mr. Holmes's general remarks on interior decoration are to the point :

" As interior decoration in colour and the painting of pictures have unfortunately become separate activities, the decorator is much more closely concerned with relationship of colours than the painter of easel pictures or the individual designer. His problem is to unite colour to architectural form, and his freedom to break up large areas with patterns is necessarily limited."—(Page 58.)

Particularly valuable, however, is the chapter devoted to " The Carrying out of Colour Schemes." I would strongly recommend The Architectural Press, in the interests of architects generally, to reprint this chapter, and circulate it amongst paint manufacturers in this country. On the subject of sample books of colour, Mr. Holmes remarks : " It is a strange fact that the ordinary sample book of ready-mixed paints of various kinds does not usually contain a comprehensive set of primary colours, but consists of a haphazard selection of various tones of the purer colours and a large number of unassorted and unrelated greys . . . Under similar conditions in the pianoforte industry, and assuming that no player were able to " mix " his own notes, each manufacturer would attempt to furnish on the keyboard an unlimited number of notes without any preconceived relationship. There would be an attempt to provide not only a key for every single variation in the scale, but also a key for every combination of notes, or chord, possible. The notes would be " ready mixed," but they would not be grouped in octaves of ready-mixed notes, or taken from any one musical composition. Imagine now the player who does not know much about music, but " knows what he likes " performing on this instrument. That is what is taking place with regard to colour in many otherwise happy homes. Greys, like chords, are mixtures which give a simultaneous impression, though the analogy must not be pressed much further."

In many colour books it is impossible, as he says, to find more than two or three colours which are well related, and he gives concise instructions as to how the manufacturer could produce a useful and well-organized sample book. The need is an urgent one. I could, but I refrain from doing so, give a fairly long list of manufacturers who supply me with almost useless colour books. The method of arriving at the particular tints is incomprehensible to me.

The whole question of standardized colours deserves serious attention. One of the most valuable contributions to this subject is Joseph Lovibond's book on *Light and Colour Theories*, which I do not see mentioned in Mr. Holmes's bibliography.

The purpose of Lovibond's book is to demonstrate that colour is a determinable property of matter, and he establishes a unit for measuring the intensity of both light and colour. He is concerned with the necessity for a system of nomenclature and reliable standards of reference. The importance of this to manufacturers is obvious.

Mr. Holmes chooses seven somewhat arbitrary primaries. There are other seven colour theories, but there is no common agreement as to what the primary colours are. To establish a unit of measurement it was necessary to establish a standard white light. Having done this, Lovibond produced an apparatus with a six-windowed frame with sliding shutters and a tray of eighteen standardized glasses, a mechanical scale which is now employed in a great number of laboratories.

Any colour can in this way be matched by standard glasses and described qualitatively and quantitatively. Colours are denoted by such symbols as R.3.0 or R.3.0—N.T.1.0. Such a system generally adopted would standardize the colour of paints or materials produced by any number of manufacturers, and instead of William the Conqueror's Red or Narcissus Yellow, some exact and standard nomenclature could prevail.

Each architect or decorator would then possess a more or less complete range of marked colour cards, by means of which an order could be placed, without fear of confusion, with any manufacturer. There are difficulties of permanence of pigments, etc., but the general principle is sound.

I would commend Mr. Holmes's book to all who are interested in the subject of interior colour decoration. I recommend Mr. Lovibond's book as a suggestive appendix.

RAYMOND MCGRATH

[1] *Colour in Interior Decoration*. By John M. Holmes. London : The Architectural Press, Ltd. Price £1 5s. net.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Lightweight Concretes

AN engineering consultant inquired regarding the types of aggregates most suitable for a lightweight, mass concrete capable of carrying a load of 3½ tons per sq. ft. The concrete was required for filling in bad ground, and it was desirable to keep the weight as low as possible. It was also stated that the work would be below ground water level.

The following materials suggest themselves for this purpose: (i) Furnace clinkers and coke breeze; (ii) pumice; (iii) blastfurnace slags; (iv) burnt clay. In addition, there are also, of course, lightweight concretes of special composition.

Of these aggregates, the clinkers and breezes are probably by far the cheapest. With furnace clinkers there is a danger of obtaining unsound material, and the consequences of this with concrete under water would be likely to be serious. By careful sampling and testing, however, it should be possible to guard against unsound material, although, no doubt, this would add appreciably to the expense. With a true coke breeze, as distinguished from the various types of coal residue to which the term is often applied, there should be no serious danger of unsoundness due to the presence of unburnt coal, but danger may be expected in the event of the presence of an excessive amount of sulphur as sulphide. Concretes made of these aggregates, even if sound, are liable to a high moisture movement, and, if exposed to conditions where alternations of humidity are likely to occur, there is a danger of cracking due to volume changes. It also appears that exposure of clinker or breeze concrete to wet conditions is likely to lead to failure in an aggravated form, in the event of unsound aggregates being present.

The dangers inherent in the use of clinker and breeze aggregates can be much reduced by the elimination of all fine material. By using only those fractions of the material retained on a ⅜ in. or ½ in. sieve, much of the risk of failure is removed. It is quite possible that a concrete, without fine aggregate, would have sufficient strength for the purpose.

Pumice aggregates are believed to be considerably more expensive than breeze or clinker aggregates. So far as is known, however, they are not likely to be unsound, and should not be liable to failures of the type associated with unsound breezes and clinkers. The moisture movement of such pumice concretes as have been examined at this Station is approximately double that of normal ballast concrete and comparable with that of a sound clinker concrete. Blastfurnace slags, as normally produced, are usually considered to give a lighter concrete than gravels. Figures from American sources indicate weights of about 130–140 lb. per cu. ft. for well-compacted slag concretes as against 150 lb. for comparable gravel concretes. Weights of representative, coarse, slag aggregates are about 70 lb. per cu. ft. against 90 lb. per cu. ft. for stone and gravel aggregates. The elimination of the finer grades would result in a considerable reduction in weight of the concrete. Granulated slags are sometimes produced by running the molten slag from the furnace into contact with water or steam. Such examples of this material as have been seen at this Station tend to be rather on the fine side, but it may be possible to obtain coarser grades.

Certain types of burnt ballast and broken brick aggregates will be found to be considerably lighter than gravel aggregates, although probably not comparable with clinker or pumice. There is also to be considered the possibility of burning ballast on the site.

So far as strengths of the lighter materials are concerned, the following table summarizes the information available in the records of this Station:

Concrete.	Crushing Strength. lb. per sq. in. Dry.	Crushing Strength. lb. per sq. in. Wet.	Weight of Concrete. lb. per cu. ft.
Pumice .. Graded ⅜ in. down. Mix not stated	490	434 (At about 1 month.)	54
Pumice .. Pumice 9. Cement 1.	432	271 (At about 1 month.)	56
Typical Clinker Concretes .. (Partition slab)	150–500	110–450	Varies from 60–80
Burnt Clay .. 1 : 6 by weight	—	2,360	approx. 110

With lightweight concretes, normally of rather a porous structure, it is likely that any deleterious substances present in soil waters will have a more aggressive effect on the cement than would occur with a densely compacted concrete.

Cavity Wall Construction

The architect for a syndicate engaged in the erection of small house property required the views of the Station on a method of wall construction in which external walls are built up of two 4½ in. leaves of brickwork, with 1 in. space between filled with cement mortar. The wall was to be built without through bond headers.

The correspondent stated that he did not care for the normal cavity form of construction in the form of two 4½ in. walls, separated by an air cavity, 2 ins. to 3 ins. wide, and bonded by metal or other ties, although he was of the opinion that an ordinary 9 in. solid brick wall does not offer really satisfactory resistance to the penetration of moisture, and that roughcast has its limitations.

No case of the penetration of moisture through a properly designed and constructed cavity wall has ever been brought to the notice of this Station, and it is considered that, with the materials at present available, the cavity wall is by far the most satisfactory form of construction for domestic buildings. The weaknesses of the cavity wall lie in the fact that careful attention must be given to details at openings: these details must be interpreted in an intelligent manner by the operative, and supervision is necessary to ensure that the cavities are kept clean. There can, however, be no doubt that the cavity form of construction has become normal practice, and the better class of builders are sufficiently familiar with it to be able to guarantee satisfactory work.

We have not made any experiments with a wall of the type suggested, but consider that in some respects it is open to objection. An interesting experiment on a practical scale was carried out by a local authority at our suggestion. Three houses were erected on a housing estate of identical bricks and mortar, the walls being built as follows:

(1) Red facing bricks backed with clinker bricks in solid 9-in. work, built with greystone lime and sand, 3½ to 1, pointed with Portland cement and washed sand. All cross joints put right through and lateral joints between stretchers thoroughly well flushed up. Plastered internally. (2) As above, but no flushing up of internal joints. (3) As above, but built as two separate 4½-in. walls, no flushing up, bonded with metal reinforcement every six courses.

On completion of the houses, a hose was attached to a ½-in. bibcock, full on and direct from the main, and was directed on the brickwork at 3-in. distance. The following observations were made: (*a*) Dampness appeared

on the inside after 3½ hours' continuous flow. (*b*) No dampness appeared after 5½ hours' continuous flow. (*c*) No dampness appeared after 9 hours' continuous flow.

The essential reason for the penetration of walls by moisture is that ordinary walling materials have a porous structure and water is transferred to the inner face of the wall by capillary forces. In the cement mortar core capillary forces will still be exerted, although with a very dense mortar the amount of water actually transmitted may be small. It would be a matter of some difficulty to ensure that a thin core of mortar is thoroughly compacted, especially since the water content of the mortar will be much affected by the absorption of the bricks. The likelihood of efflorescence will be much increased: it is generally recognized that much of the efflorescence observed on new brickwork is due to soluble salts derived from Portland-cement mortar joints. The amount of salts available will be appreciably increased by the 1-in. core.

An important factor also is the tendency for cement mortars to crack, and any defects of this kind will be liable to result in damp areas at the inner face of the wall. There would be an additional difficulty in ensuring that the mortar core is quite watertight round any ties which are used to form a bond between the two half-brick walls.

SOCIETIES AND INSTITUTIONS

SPOLIATION OF THE COUNTRYSIDE

MR. ERNEST H. BUCKINGHAM, F.R.I.B.A., President of the Norfolk and Norwich Association of Architects, presided at a joint meeting of architects and builders, held at Norwich on November 13.

Mr. Edwin Gunn, lecturing on "Architecture and the Crafts," said that he had never addressed a joint meeting of architects and builders before, so they would forgive him if he took advantage of the occasion. He was afraid the sermon would be popular with neither. His text was standardization as a palliative for the dismal stupidities and lapses of taste which afflicted the bulk of cheap building carried out without architectural aid since the rise of industrialism. Previous to the decay of individual craftsmanship such building existed but was invariably inoffensive and sometimes quietly beautiful.

He would be either a bold or a blind man who would claim that it was so now. The day of the small self-supporting community was ended by ready means of transport. Of the old independent craftsmen the thatcher was the sole survivor. In these circumstances they must seek fresh lines if, as he believed, the present conditions were a needless muddle and an imperfect utilization of man's best powers. The function of an architect was to design and of a builder to construct. What he objected to about many architects was that they seemed to have no clear aim in design, and about many builders that they seemed to lack constructive sense.

Speaking of the characteristics which made most recent cheap housing estates so fidgety and mean in appearance, Mr. Gunn said that with all its dullness he preferred the Victorian terrace to the modern building estate, on which every land-purchaser followed his bent as to size, height, forward or backward position and angle-inch frontage, not to mention material and colour. There were State-aided housing schemes in which, from a mistaken effort to achieve liveliness, blocks of houses were disposed alternately backward and forward, and the materials varied from brick to roughcast and from slate to tiles on no discoverable plan. And how did the thousand and one varieties of each common detail, windows, doors, etc., benefit anyone or contribute to the visual pleasure? He would like to see applied to the housing of the multitudes the same principle as the Swedes applied to industry. Let them get their standard plans refined and improved, striving by experience to make every essential as perfect as could be. They need not fear long lines or unbroken series, but they must be specially careful at all road junctions or angles, where a little thought and skill on modified types could make or mar a scheme. Let them use standard patterns for all repetitive details, but let the patterns be as good as they could be made.

Mr. Edwin Gunn, A.R.I.B.A., whose lecture on "Architecture and the Crafts" is reported on this page.

ARCHITECTURE IN IRELAND

Judged by contemporary standards, the Irish architects could claim that at least they were as good as their public deserved, said Mr. Manning Robertson, F.R.I.B.A., at a meeting of the Architectural Association of Ireland, held on November 10.

In Ireland, he continued, they had as a body concerned themselves actively with the training and education of architects. They aimed at a good standard, and were entitled to say to the public: Give your architects a chance; they know their jobs. In Ireland during the Victorian period, when building was largely the output of amateurs, they had less building, and now less consequence to lament, but the habit of disregarding the qualified architect, especially in house work today, was identical. It was up to each individual to see that his work was up to the standard, since the dissatisfied client was more likely to build for himself in future than employ another architect.

Dealing with architecture generally, he said that civilization must include art, not as an agreeable by-product or relaxation, but as an essential for everyday expression and wellbeing. Commerce was discovering that art paid.

He warned architects to be on guard against frightening the public by excesses in modernism that might be legitimate, but not always tasteful. Many of the Continental examples of stark realism were unlikely to stand the test of time, and, robbed of their newness, they would be seen to lack the enduring virtues of good proportion and architectural composition.

PLACES OF ENTERTAINMENT

Mr. W. Milburn, B.SC., F.R.I.B.A., lecturing on "Places of Public Entertainment," at a meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, held at Sheffield, said, in spite of all the thought and care which was devoted to render places of public entertainment safe for the public, there still remained the human element to control, and the risk of panic. The audience should have confidence in the building, and know that everything possible had been done for their safety, and that in any circumstances there was no need to take panic or alarm. It was desirable to familiarize them with all exits, so that they had knowledge of egress, other than by the way they entered.

The system in some American cities of numbering the exits and printing on the programmes plans of the floors and tiers, showing the exits, was a step in this direction, for if only a few members of the audience studied the plans, they would, if an emergency arose, be able

to guide sections of the audience away from the building. Plans of the building placed in the foyers, or other public places, showing the exits and surrounding streets, might also be of advantage.

BEAUTY IN BRIDGES

"Beauty in Bridges" was the subject of an address by Mr. G. H. Jack, F.R.I.B.A., at a meeting of the Liverpool Architectural Society on November 11.

The disappearance of old bridges in industrial areas was inevitable, said Mr. Jack, but in rural districts where the traffic was not so intense we might hope to preserve the good work of our forefathers for a long time to come, though we must avoid an obsession for preserving the merely old. There was more bad work than good in every period, and much of the beauty we admired was due largely to the limitations of the mediæval builders, who could not deal with long spans.

But wherever the clever architect of the Middle Ages had a good chance he made the most of it, and to this day we had not been able to surpass in grace the best work of the fourteenth century. Our productions seemed to lack spirit. We had standardized our methods, and consequently our modern road bridges looked very similar.

He would like to see every bridge of character scheduled, not with the idea of preventing demolition, but in order to give time for the careful consideration of whether it would not be advantageous to recondition and preserve.

Professor Abercrombie, who presided, announced that the H. W. Williams £50 award for a design in concrete had been won by Mr. Glynn Roberts.

MODERN SCULPTURE

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), a lecture on "Modern Sculpture" was given by Mr. W. Aumonier, at the Engineers' Institute, Cardiff, on Thursday, November 12.

The lecturer dealt with modern sculpture, not only in America and Great Britain, but also in Norway, Denmark, Sweden, Holland, Germany, Austria, France, Czechoslovakia and Yugoslavia, and made particularly interesting references to a number of the more extreme examples which have been so much discussed in recent times, including Epstein's "Genesis."

He suggested that the public should not condemn experiment in sculpture without careful thought, and explained that while modernist examples naturally varied in type and quality, many of them were undoubtedly the result of a genuine effort on the part of able sculptors to express themselves more fully than they found possible on traditional lines. He drew attention, however, to the great importance of a full and scholarly training on traditional lines as a necessary preliminary to later efforts in whatever direction these might develop.

SWEDISH ARCHITECTURE

Mr. F. R. Yerbury, HON. A.R.I.B.A., lecturing on "Modern Swedish Building," at the Royal Institution on November 14, pointed out that it was during the last two or three years that some of the Swedish architects had flirted with the idea of an international architecture and had produced a style, such as at the Stockholm Exhibition, 1930, popularly known as "Funkis," which was heartily approved of by some and equally heartily disliked by others.

But whatever line of adventure the Swedish architect followed, he never seemed to lapse into bad taste or show any trace of vulgarity in his work, with the result that the Swedes were uniquely fortunate in having no really bad new buildings.

COMPETITIONS OPEN

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions were obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Building, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost to be less than £1,000) for the Incorporated Association of Architects and Surveyors. Premiums: 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

The last day for submission of designs in the Southampton Grammar School Competition has been extended to December 8.

THE ARCHITECTS' DIARY

WEDNESDAY, NOVEMBER 25

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of photographs and drawings of Russia's new buildings. Until December 18.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "A Comparative Analysis of French and Italian Renaissance." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "French Architecture." By J. De la Courcelle. **6 p.m.**

THURSDAY, NOVEMBER 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Carving as a Method of Enriching Furniture." By H. P. Shapland, A.R.I.B.A. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate, "Glories of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

APPLIED ARTS AND HANDICRAFTS EXHIBITION. At the Royal Horticultural Hall, Westminster, S.W. Until December 4.

FRIDAY, NOVEMBER 27

NATIONAL HOUSING AND TOWN PLANNING CONFERENCE. At Blackpool. Until Monday, November 30.

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Glories of Gothic." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

ROYAL SANITARY INSTITUTE. At the Town Hall, Sheffield. "Regional Smoke Abatement." By Councillor W. Asbury and J. Law. **3 p.m.**

OXFORD BUILDING TRADES EMPLOYERS' ASSOCIATION AND THE OXFORD SOCIETY OF ARCHITECTS. At the Cadena Café, Oxford. "The 1931 Form and Conditions of Contract." By Sydney Tatchell, F.R.I.B.A. **7 p.m.**

SATURDAY, NOVEMBER 28

Sunrise, 7.38 a.m. Sunset, 3.57 p.m.

MONDAY, NOVEMBER 30

R.I.B.A., 9 Conduit Street, W.1. "Street Architecture." By Howard Robertson, F.R.I.B.A. Also presentation of London Architecture Medal, 1930. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Second of six lectures on "The History of Architecture—XIIIth Century." By Herbert Mansford. **7.30 p.m.**

TUESDAY, DECEMBER 1

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "The Artist in Relation to Industry, with particular reference to Decoration." By H. H. Holden.

WEDNESDAY, DECEMBER 2

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Development of Lighthouses." By D. Alan Stevenson, M.INST.C.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Chateaux on the Loire." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, DECEMBER 3

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Collecting Cottage Furniture." By Fred Skull. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Later Gothic Buildings." By R. Goulburn Lovell. A.R.I.B.A. **7.45 p.m.**

FRIDAY, DECEMBER 4

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Later Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, DECEMBER 5

Sunrise, 7.48 a.m. Sunset, 3.52 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Last of five non-technical Lectures on Present-Day Architecture. "Planning the Town." By Dr. Raymond Unwin, P.R.I.B.A. **3 p.m.**

WEDNESDAY, DECEMBER 9

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Roads and Road Transport." By Sir Henry Maybury, G.B.E. **8.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Borromini." By Lord Gerald Wellesley, F.R.I.B.A. **6 p.m.**

MANCHESTER SOCIETY OF ARCHITECTS. "The Furnishing of Buildings." By Edward Maufe, F.R.I.B.A. **6.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C. "The Louvre and the Tuileries, Paris." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, DECEMBER 10

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At College of Art, Leeds. "Architectural Lighting." By R. Waldo Maitland, A.R.I.B.A. **7 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, DECEMBER 11

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "Some Economics and Advantages that have resulted from Town Planning." By F. Marsden, M.T.P.I. **6 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

LAW REPORT

CONSTRUCTION OF A ROAD-MAKING CONTRACT

Marsden Urban District Council v. *Sharp and another. Before Lords Justices Scrutton, Greer and Slesser*

THIS was an appeal by the plaintiffs, the Marsden Urban District Council, from a decision of Mr. Justice Rowlatt, sitting in the King's Bench Division, in a special case stated under section 7 of the Arbitration Act, 1889.

It raised a question of the construction of a road-making contract and the amount of damages payable thereunder.

Mr. Rayner Goddard, K.C., for the appellants, stated that the contractors had been engaged by the Council in making a road over Standedge Moor, and the Council alleged that the work had been badly done and that they were entitled to damages.

The contract under which the work was executed contained an arbitration clause, and also a clause, No. 35, which was here material. It stated :

> Should it at any time subsequent to the termination of the period of maintenance up to but not exceeding a period of five years from the date of the completion of the works be discovered that the terms of this specification have been violated by the execution of bad, insufficient or inaccurate work the council shall be at liberty to make good such work and to recover the cost thereof from the contractor . . .

The Council alleged that before the period of five years had expired they discovered that the concrete used by the contractors was defective, and that the road was beginning to fall into bad repair. They found that further damage occurred after the expiration of the period. They claimed a sum from the contractors by way of damages. The matter was referred to arbitration, and the arbitrator stated this case for the opinion of the Court.

It was at first contended that in any event the Council could not make any claim against the contractors unless they had themselves first done the work of making defects good, but that point was abandoned. The only point now to be decided by the Court was whether the Council could recover for work which was not discovered to be defective until after the five years had passed.

The question which arose was which of the two alternative sums named by the arbitrator as damages the Council were entitled to recover.

Counsel argued that before the five years had passed the Council discovered that defective concrete had been used, and that was a violation of the specification and gave a right to all the damages naturally resulting.

Mr. Justice Rowlatt held that the Council could only recover for the defects discovered within the five years to the natural extent of that discovery, and that such discovery did not entitle the Council to recover for defects discovered thereafter.

The Court, without calling upon Mr. Macaskie, K.C., for the contractors, dismissed the appeal.

Lord Justice Scrutton, in the course of his judgment, said in his view both the arbitrator and the judge in the Court below had arrived at a right conclusion. Mr. Justice Rowlatt had held that clause 35 was limited to actual discovery within five years, and not to a subsequent discovery. His lordship could only say that he should have taken the same view himself. It followed that the appeal failed and must be dismissed.

Lords Justices Greer and Slesser concurred.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

St. David's Wing for Private Patients, Royal Northern Hospital, Manor Gardens, Holloway Road, N. (pages 698–703). General contractors, Dove Bros., Ltd., who were also responsible for the demolition, excavation, fireproof doors and plumbing. Sub-contractors : Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, foundations and reinforced concrete; Ragusa Asphalte Paving Co., Ltd., damp-courses and asphalt ; Geo. M. Callender & Co., Ltd., " Ledkore " dampcourses; S. and E. Collier, Ltd., and T. B. Lawrence and Sons, bricks; Bath and Portland Stone Firms, Ltd., stone; Patent Victoria Stone Co., Ltd., artificial stone; North British Rubber Co., rubber flooring; James Slater & Co. (Engineers), Ltd., central heating; Bratt, Colbran & Co., Ltd., grates and mantels; Girdlestone & Co., electric wiring; Doulton & Co., Ltd., sanitary fittings; A. E. Davis, door furniture; Crittall Manufacturing Co., Ltd., casements; F. Jukes, folding gates and metalwork; Haywards, Ltd., iron staircases; R.N.H. Works Dept., flush hospital door; Art Pavements and Decorations, Ltd., marble; W. B. Simpson and Sons, Ltd., tiling; Waygood-Otis, Ltd., lifts; Mumford, Bailey and Preston, kitchen equipment ; Fosalsil partition blocks were used.

Bolling High School for Girls, Flockton Road, Bradford (pages 705–707). J. Moulson and Son, Ltd., mason and joiner; T. Feather, plasterer and concretor; Atkinson and Smith, Ltd., plumber and glazier; J. Smithies and Sons, slater; A. Dibb, painter; J. Carter, electric lighting; S. Butler & Co., Ltd., steelwork; G. N. Haden and Sons, Ltd., heating; D. A. Holdsworth and Son, Hirst and Smith, Dunhill Bros., and Midland Educational Co., Ltd., furnishing contractors.

TRADE NOTES

Messrs. G. A. Harvey & Co. (London), Ltd., are showing an extensive range of perforated metals at the Engineering Exhibition, now being held at Cardiff. This firm specializes in both perforated metal and woven wire, suitable for screening, grinding, separating and filtering such widely different commodities as coal, coke, gravel, ore, sugar, food products and fine chemicals. A selected range of ornamental patterns for radiator covers, pipe guards, grilles and ventilating panels, are also on view. The use of English steel furniture, both in offices and works, has considerably increased during the last few years, and Messrs. Harvey & Co. have accordingly considerably extended their steel furniture department.

Many kinds of industrial plant are manufactured at the firm's works, and equipment of the latest type is installed, and they claim to have one of the most up-to-date departments in the United Kingdom for the economical production of industrial plant in copper, aluminium, nickel and stainless steel, up to 1½ ins. in thickness and in the largest sizes.

Facilities are available to produce hydraulic presswork on the spot, and presses able to produce dished and flanged ends up to 10 ft. 6 ins. diameter by 1½ ins. thickness have been installed, amongst others. Apart from the heavy plate work associated with the chemical and allied trades, the firm claim to have a unique experience in all kinds of sheet-metal work, wire work, tank making, and galvanizing.

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An exhibition of modern decorative treatments by the use of white and coloured cements was opened at Portland House, Tothill Street, London, S.W.1, on October 16. The exhibition consists of over seventy panels showing different types of finishes obtained mainly by the use of " Snowcrete," British white Portland cement and the new " Tintocrete " patent cement-spraying process. The exhibition will remain open until November 28, between the hours of 10 a.m. to 4.30 p.m.

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On Tuesday morning, October 20, a " rush " order was received by the United Strip and Bar Mills of the United Steel Companies, Ltd., Sheffield, for 375 tons of steel bar. The mill commenced work on this order at 11.20 a.m. that morning. At 11.10 p.m. the same day, the rolling was completed. At 1.40 a.m. on the following day, the whole of the material had been inspected, tested and loaded, and it was delivered to a destination 76 miles distant by 5.40 a.m.—eighteen hours from the commencement of work. The magnitude of the task will be understood when it is realized that this tonnage of steel represents 74 miles of bar, or nearly 400,000 ft. of steel, all rolled and delivered in much less than twenty-four hours.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The St. Pancras House Improvement Society, Ltd., is to re-develop part of the Drummond Crescent Area, CAMDEN TOWN.

The Essex Education Committee is to acquire sites on the Rylands estate, DAGENHAM, for the erection of two elementary schools.

Messrs. Richard Costain and Sons, Ltd., are to develop the Rylands estate, DAGENHAM. The layout scheme provides for the erection of 1,900 houses.

The FINSBURY Borough Council is to erect eleven flats in Margaret Street, at a cost of £6,950.

The Essex Education Committee has approved plans for the erection of new premises for the ILFORD county high school for boys, at a cost of £52,648.

The Ecclesiastical Commissioners are to erect 188 flats in Wilcox Street, LAMBETH.

The Surrey Education Committee has acquired a site in Middleton Road, MORDEN, for the erection of a school clinic.

SOUTHERN COUNTIES

Mr. G. T. Richards is in negotiation with the BOURNEMOUTH Corporation regarding a scheme for the erection of a residential hotel, adjoining the Overcliff Drive, Southbourne.

Messrs. Seal and Hardy have prepared a scheme for the development of Pine Grange estate, Bath Road, BOURNEMOUTH.

Plans have been prepared by Mr. S. Jackson for the development of the St. Peter's Vicarage site, BOURNEMOUTH.

Plans passed by the BOURNEMOUTH Corporation: Three houses, Cardigan Road, for Mr. A. E. Adams; block of shops and flats, Exeter Road, for Mr. F. F. Tarrant; two houses, Pauncefote Road, for Messrs. A. J. Abbott and Son; additions, 10 Christchurch Road, for Bournemouth Motor Stations, Ltd.; alterations, 2-3 The Square, for Messrs. Gordons, Ltd.; shop and house, and eight bungalows, Kinson Road, for Mr. A. W. Saunders; twenty-six bungalows, St. Mary's Road, Ensbury, for Mr. F. J. Marks; two shops, Pokesdown Hill, for Mr. S. Kermode; five houses, Petit Road, for Mr. J. Kay; shop and house, Lystra Road, for Messrs. Newton and Fry; two houses, Belle Vue Road, for Mr. C. B. Phillpott; eight houses, Cranleigh Road, for Messrs. H. B. and E. Mudge; two houses, Noel Road, for Mr. C. Hawkins; extensions, Corpus Christi Church, Christchurch Road, Boscombe, for Rev. R. Baines.

Plans passed by the BRIGHTON Corporation: Alterations, 181-5 Western Road, for Messrs. F. W. Woolworth & Co., Ltd.; two houses, Winfield Avenue, Patchdean, for Mr. P. Wilson; two houses, Warren Road, for Mr. W. H. Clark; twelve houses, Bevendean Crescent, for Messrs. Braybons, Ltd.; alterations and additions, 20-3 Middle Street and 66-8 West Street, for Mr. B. D. Pinfold; alterations and additions, 159-160 Lewes Road, for Mr. A. S. Tilley; alterations and additions, Continental Hotel, High Street, Rottingdean, for Mrs. M. Wilshire.

The Kent C.C. is to remodel the COXHEATH institution, near Maidstone, at a cost of £25,000.

The LITTLEHAMPTON U.D.C. is to erect forty houses on the Thorncrost estate.

The MAIDSTONE Corporation is to erect eighty houses on the Western Road estate.

Mr. J. Clements is to erect fourteen houses in Detling Road, NORTHFLEET.

SOUTH-WESTERN COUNTIES

The BARNSTAPLE Corporation has obtained sanction to borrow £7,350 for various improvement schemes at the baths and parks.

The DORCHESTER Corporation has obtained sanction to purchase seven acres of land for the extension of the Victoria housing estate. Twenty houses are to be erected.

Plans passed by the DORCHESTER Corporation: House, Monmouth Road, for Mr. S. C. Budd; grand stand, football ground, for Dorchester Football Club; sanitary accommodation, cemetery, Weymouth Avenue, for Burial Committee; alterations, High Street East, for Messrs. G. Wright and Son.

The PAIGNTON U.D.C. is acquiring a site at Goodrington, for the erection of a pumping station.

Plans passed by the PAIGNTON U.D.C.: Four houses, Colin Road, for Messrs. Jones Bros.; additions, 24 Garfield Road, for Messrs. Dellers' Supply Stores, Ltd.; layout of ninety-six building sites, Blatchcombe Road, for Mr. A. Chippindale; house, Three Beaches estate, for The Coasts Estate, Ltd.; twelve houses, Clifton Road, for Messrs. Knapman Bros.; estate development, Colley End Road, for Messrs. Eastley & Co.; five houses, Headland Park Road, for Mr. H. Proctor; house, Shorton Lane, for Mr. K. Shears; house, Dartmouth Road, for Mr. A. Linford.

EASTERN COUNTIES

The Essex C.C. proposes to erect an admission hospital at the BRENTWOOD mental hospital, at a cost of £50,000; and enlarge the nurses' home, at a cost of £11,500.

The HITCHIN U.D.C. is to erect 166 houses and flats on the Walsworth estate.

The Essex Education Committee has passed plans for extensions at High Road School, LAINDON, at an estimated cost of £8,000.

Plans passed by the LOWESTOFT Corporation: Four houses, Kingston estate, Yarmouth Road, and houses, Normaston Drive, for Mr. S. C. King; two houses, Kirkley Run, for Mr. H. Mitchell; house and shop, Kirkley Run, for Mr. M. R. Graham; house, Chestnut Avenue, for Mr. S. F. Godbold; bungalow, Victoria Road, for Mr. Wm. Browne.

The Essex C.C. has prepared plans for the provision of additional accommodation at the SEVERELLS mental institution, at an estimated cost of £52,600.

The Essex C.C. has arranged with the L.N.E.R. for the reconstruction of Nags Head Lane bridge, near SHENFIELD, at a cost of £18,000.

The Essex Education Committee has purchased a site at WEST THURROCK, for the erection of a senior school.

MIDLAND COUNTIES

The ALCESTER R.D.C. is to build forty houses for agricultural workers.

Plans passed at BURSLEM: Four houses, off Milton Road, for Mr. B. S. Phillips; bungalow, off High Lane, for Mr. J. Birch; alterations, Longport Mills, for Messrs. H. and R. Johnson, Ltd.; additions, Chapel Lane, for Messrs. F. Copestick & Co.; six houses, Sneyd Street, for Mr. J. Jackson.

The COVENTRY Corporation is to erect 100 houses on the Stoke Aldermoor estate.

Plans passed at HANLEY: Alterations, Imperial Picture Palace, Glass Street, for Imperial Picture Palace; alterations, shop premises, Lamb Street, for Messrs. McIlroys; alterations, old fish market, Lamb Street, for Messrs. Hontbach & Co.; memorial hall, Queen's Road, for Mrs. Montford; reconstruction of premises, Grosvenor Street, for Messrs. R. H. Bell, Ltd.; two houses, Longton Road, for Mr. J. James.

The SHIPSTON-ON-STOUR R.D.C. has prepared a scheme for the provision of 118 houses for agricultural workers.

Plans passed by the STOKE-ON-TRENT Corporation: Five houses, Bedford Street, Basford, for Mr. G. A. Johnson; shop, Trent Vale, for Swettenhams Co-operative Institutions; six houses, Elliott Street, Penkhull, for Mr. A. Millward; alterations, Market Street, Fenton, for Plaza Cinema Co.; shop and house, Sandon Road, Meir, for Mr. H. Hammond; two houses, Gladstone Street, for Mr. J. Addison; alterations, old Crown Inn, Commerce Street, Longton, for Mr. Walklate; two houses, Branch Lane, Hanford, for Mr. F. Gibson; eighteen houses, Leek Road, for Messrs. Holloway & Co.; two houses, Quarry Avenue, Hartshill, for Mr. E. Harris; extensions, Vivian Road, for Burslem and District Co-operative Society, Ltd.; four houses, Brocksford Street, Fenton, for Mr. H. R. Hughes; two houses, Weston Road, Meir, for Mr. H. Godwin.

The STRATFORD-ON-AVON R.D.C. is to erect 115 houses for agricultural workers.

Plans passed at TUNSTALL: Shop and two bungalows, High Street, for Messrs. Maddock and Sherratt; two bungalows, Packmoor Road, for Mr. C. Sutton; two houses, Chell Green Avenue, for Messrs. Ray and Sons; additions, Royal Albert Pottery, for Messrs. A. Meakin, Ltd.

The Warwickshire Education Committee is to obtain a site at WILNCOTE, for the erection of an infants' school.

NORTHERN COUNTIES

The Durham County Education Committee has approved revised plans for the erection of a school clinic and welfare centre at BLAYDON.

The BLYTH Corporation is in negotiation for land at Bebside, for the erection of fifty houses.

The DURHAM County Education Committee is to provide portable school buildings at Billingham, at a cost of £6,000; at Horden, at a cost of £3,000; and at Monkton, at a cost of £2,000.

The ESTON U.D.C. has arranged for the further development of the Grangetown estate, by the erection of two-bedroomed houses.

The PENRITH U.D.C. has obtained sanction to borrow £37,000 for the erection of 120 houses on the Tyne Close estate.

Plans passed by the SEDGLEY U.D.C.: Rebuilding Alexandra Hall, Redhall Lane, for Mr. A. R. G. Jones; two bungalows, Moden Hill, for Mr. G. Sheldon; four houses, Ward Road, for Mr. E. Minty; house, Robert Street, for Mr. A. Collins.

The SOUTH SHIELDS Corporation is seeking a site at Ceadon Park for the erection of houses for aged persons.

The SOUTH SHIELDS Corporation is to proceed with the Mitre Street clearance scheme, which will include the erection of about 300 new houses on various sites.

Plans passed by the SOUTH SHIELDS Corporation: Ten bungalows, Summerhill Road, for Mr. J. H. Woolgar; alterations, premises in Winchester Street, for Messrs. T. A. Page and Son; additions, Empire Palace, Ltd., Mill Street, for Messrs. W. and T. R. Milburn; extensions, business premises, 34–8 Hill Street, for Mr. P. Johnson.

The WAKEFIELD Corporation is seeking sanction for permission to erect 100 houses, by direct labour, on the Eastmoor estate, at a cost of £39,000.

The WAKEFIELD Corporation is to proceed with the scheme for the erection of public baths in Almshouse Lane, at a cost of £24,970, providing a grant is obtainable.

Plans passed by YORK Corporation: Fourteen houses, and two shops, Hull Road, for Mr. H. Williamson; three houses, Greencliffe Drive, for Messrs. R. J. Pulleyn and Sons; two houses, Bermby Avenue, for Messrs. J. Allison and Son; layout of Hull Road estate, for Messrs. Abbott and Son; additions, 26 Goodmangate, for Messrs. A. E. Steigmann & Co.; additions, Market Tavern, Coppergate, for Tadcaster Tower Brewery Co., Ltd.

SCOTLAND

The GLASGOW Corporation is to erect twenty-four houses at Altyre Street, Tollcross.

The GLASGOW Education Committee is to erect an elementary school in Elmvale Street, Springburn.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester ..	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_3	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¼
A	Morecambe	N.W. Counties	1 6½	1 2
A	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	Southampton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1¼
A_3	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

*In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . . per hour		1	8
Carpenter . . . . . ,,		1	8
Joiner . . . . . ,,		1	8
Machinist . . . . . ,,		1	9
Mason (Banker) . . . . . ,,		1	8
,, (Fixer) . . . . . ,,		1	9
Plumber . . . . . ,,		1	8
Painter . . . . . ,,		1	7
Paperhanger . . . . . ,,		1	8
Glazier . . . . . ,,		1	8
Slater . . . . . ,,		1	8
Scaffolder . . . . . ,,		1	4
Timberman . . . . . ,,		1	4
Navvy . . . . . ,,		1	3
General Labourer . . . . . ,,		1	3
Lorryman . . . . . ,,		1	5½
Crane Driver . . . . . ,,		1	7
Watchman . . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . . . per ton	2	8	6
Blue Lias Lime . . . . . ,,	2	10	6
Hydrated Lime . . . . . ,,	2	16	0
Portland Cement . . . . . ,,	2	6	0
Rapid Hardening Cement . . . . ,,	2	13	6
Thames Ballast . . . . . per Y.C.		8	3
¾" Crushed Ballast . . . . ,,		9	6
Building Sand . . . . . ,,		10	0
Washed Sand . . . . . ,,		11	6
2" Broken Brick . . . . . ,,		9	6
¾" ,, ,, ... ,,		12	6
Pan Breeze . . . . . ,,		6	6
Coke Breeze . . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4"			6"		
	s.	d.		s.	d.	
Straight pipes . . per F.R.	1	1		1	6	
Bends . . . . each	2	10		4	4	
Taper bends . . . ,,	6	3		7	2	
Rest bends . . . ,,	5	9		8	9	
Single junctions . . ,,	3	9		5	9	
Double ,, . . . ,,	5	9		8	9	
Straight channels . . ,,	2	6		3	2	
¼" Channel bends . . ,,	7	8		—		
Channel junctions . . ,,	7	0		12	6	
Channel tapers . . . ,,	5	6		7	9	
Yard gullies . . . ,,	9	6		11	6	
Interceptors . . . ,,	18	6		25	9	
Iron drain pipe . . per F.R.	2	3		3	5	
Bends . . . . each	6	0		13	0	
Inspection bends . . ,,	15	3		24	0	
Single junctions . . ,,	9	3		18	0	
Double junctions . . ,,	14	0		27	6	
Lead wool . . . . lb.		6		—		
Gaskin . . . . ,,		5		—		

BRICKLAYER

	£	s.	d.
Flettons . . . . . per M.	3	1	6
Grooved do. . . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . . ,,	8	16	0
,, Brindles . . . ,,	8	0	0
,, Bullnose . . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R at Nine Elms:	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . . ,,	2	11
York stone . . . . . ,,	6	9
,, Sawn templates . . . ,,	7	6
,, Paving, 2" . . . . F.S.	1	8
,, ,, 3" . . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . . per M.	35	0	0
22" × 12" Marchionesses . . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . . ,,	17	0	0
18" × 9" Ladies . . . . ,,	15	6	0
Westmorland green (random sizes) . per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each			9½
,, hand-made . . . ,,			10
Nails, compo . . . . lb.			4
,, copper . . . ,,		2	0

CARPENTER AND JOINER

	£	s	d.
Good carcassing timber . . . F.C.		2	6
Birch . . . . . as 1" F.S.			9
Deal, Joiner's . . . . ,, ,,			5
,, ,, 2nds . . . ,, ,,			4
Mahogany, Honduras . . . ,, ,,	1	3	
,, African . . . ,, ,,	1	1	
,, Cuban . . . ,, ,,	2	6	
Oak, plain American . . . ,, ,,	1	0	
,, Figured ,, . . . ,, ,,	1	3	
,, Plain Japanese . . . ,, ,,	1	2	
,, Figured ,, . . . ,, ,,	1	5	
,, Austrian wainscot . . ,, ,,	1	6	
,, English ,, . . . ,, ,,	1	11	
Pine, Yellow . . . . ,, ,,	1	0	
,, Oregon . . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,	1	3	
,, Burma . . . ,, ,,	1	2	
Walnut, American . . . ,, ,,	2	3	
,, French . . . ,, ,,	2	3	
Whitewood, American . . ,, ,,	1	1	
Deal floorings, ¾" . . . Sq.	1	1	0
,, ¾" . . . ,, ,,	1	3	6
,, 1" . . . ,, ,,	1	5	6
,, 1¼" . . . ,, ,,	1	11	0
,, 1½" . . . ,, ,,	1	15	0
Deal matchings, ¾" . . . ,, ,,		16	0
,, ¾" . . . ,, ,,		17	6
,, 1" . . . ,, ,,	1	6	0
Rough boarding, ¾" . . . ,, ,,		18	0
,, 1" . . . ,, ,,	1	0	0
,, 1½" . . . ,, ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			⅝"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6			
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6			
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–			
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–			
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–			
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–			

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent
Gas . . .	62½	Galvanized gas	50
Water . . .	58½	,, water	45
Steam . . .	55	,, steam	40

FITTINGS.

Gas . . .	57½	Galvanized gas	47½
Water . . .	52½	,, water	42½
Steam . . .	47½	,, steam	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of	3" s.	d.	4" s.	d.
ordinary thickness metal . F.R.	7		10	
Shoes . . . . . each	2	3	3	3
Anti-splash shoes . . . ,,	5	0	8	6
Boots . . . . . ,,	3	3	4	6
Bends . . . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets. . ,,	4	0	6	3
Plinth bends, 4½" to 6" . . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5		6	
Stop ends . . . . . each	6		7	
Angles . . . . . ,,	1	7	1	11
Obtuse angles . . . . ,,	2	0	2	6
Outlets . . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . . cwt.	21	6
,, drawn pipes . . . ,,	22	0
,, soil pipe . . . . ,,	25	0
,, scrap . . . . ,,	11	6
Solder, plumbers' . . . . lb.		11
,, fine do. . . . ,,	1	3
Copper, sheet . . . . ,,	1	0
,, tubes . . . . ,,	1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . ,,	1	1	1	3	2	8
Galvanized . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . ,,	3	9	5	3	10	3
Shoes . . ,,	2	10	4	4	9	6
Heads . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.	s.	d.
Sheet glass, 21 oz. . . F.S.			3	7½
,, ,, 26 oz. . . ,,			4	8½
Arctic glass . . . ,,			5	
Cathedral glass . . ,,			6	
Hartley's rough rolled . ,,			9	
Do. wired plate . . ,,			1	3
¼" Polished plate, n/e 1 ft. . ,,	7½ to		1	0
,, ,, 2 . . ,,	10 ,,		1	3½
,, ,, 3 . . ,,	1	4½ ,,	1	10
,, ,, 4 . . ,,	1	11 ,,	2	4
,, ,, 6 . . ,,	2	3 ,,	2	7½
,, ,, 8 . . ,,	2	5 ,,	3	0½
,, ,, 12 . . ,,	2	10 ,,	3	3½
,, ,, 20 . . ,,	3	3½ ,,	3	9
,, ,, 45 . . ,,	3	6½ ,,	4	0½
,, ,, 65 . . ,,	3	11½ ,,	4	4
,, ,, 90 . . ,,	4	4 ,,	4	9
,, ,, 100 . . ,,	4	6 ,,	4	11
Vita glass, sheet, n/e 1 . . ,,			1	6
,, ,, 2 . . ,,			1	3
,, ,, over 2 . . ,,			1	9
,, ,, plate, n/e 1 ft. . ,,			1	6
,, ,, ,, 2 . . ,,			3	0
,, ,, ,, 5 . . ,,			4	0
,, ,, ,, 7 . . ,,			5	0
,, ,, ,, 15 . . ,,			6	0
,, ,, ,, over 15 . . ,,			7	6
Putty, linseed oil . . . lb				3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		2	4
Boiled oil . . . . ,,		2	8
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n.e 12" deep and cart away	Y.S.	3 6
" to reduce levels n.e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n.e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add "	3 0
If in underpinning	" "	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
¼" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1¼" " " " "	"	2 7 6
3" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1¼" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1¼" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 1" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅞" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1¼" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1¼" × 1¼" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	"	2 0 6
Do. in covering to turrets, etc.	"	2 7 6
Do. in soakers	"	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

Lead service pipe and fixing with pipe hooks	F.R.	½" s. d. 1 2	¾" s. d. 1 7	1" s. d. 2 1	1¼" s. d. 2 8	2" s. d. 3 8	4" s. d. —
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1¼" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " " "	"	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper	from "	2 9

LUXURY SHOP WINDOW

HERPICH'S BERLIN FUR STORE: BY ERICH MENDELSOHN

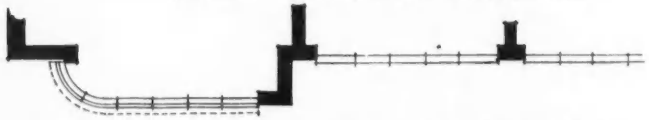
THE CONTINUOUS GROUND FLOOR WINDOW

THIS fur business originated in three dwelling-houses, combined and extended. The building of which a photograph is given above, with the relative detail drawings overleaf, was erected in three sections, and completed in 1924.

The constructional members lie back from the façade, so that, on the ground floor, the show windows present an unbroken expanse of glass. Here, too, for the first time the display lighting has been expressly included in the architectural form: the sills of the windows encase directional lights arranged in troughs. The source of the lighting is thus invisible from the street outside and does not dazzle the spectator.

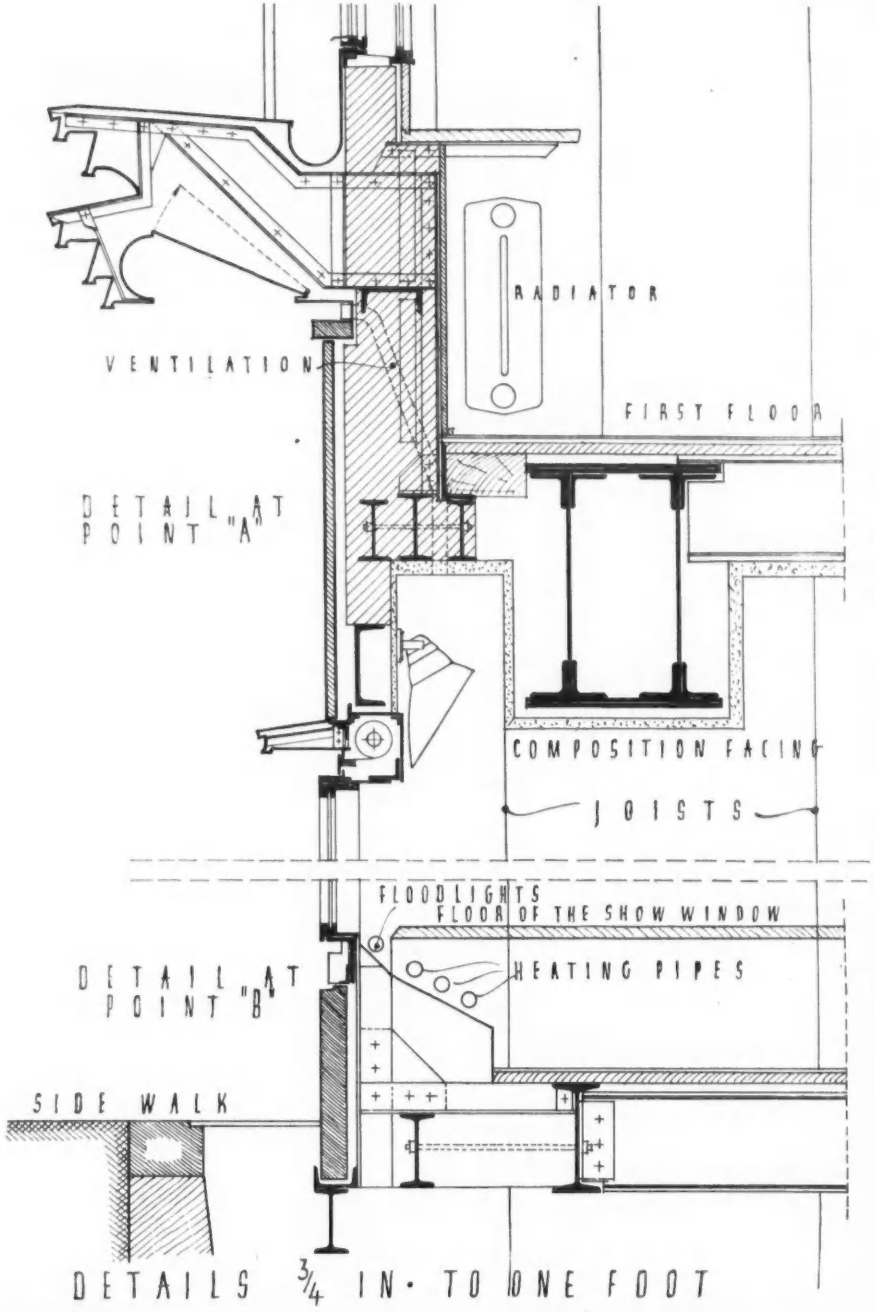
The façade is clothed with slabs of black limestone. The show windows, other windows and lighting troughs are of bronze, burnished for the ground floor, and toned brown for the upper stories.

PART ELEVATION



PLANS OF 1ST TO 4TH FLOORS
SCALE 16 FEET ONE INCH

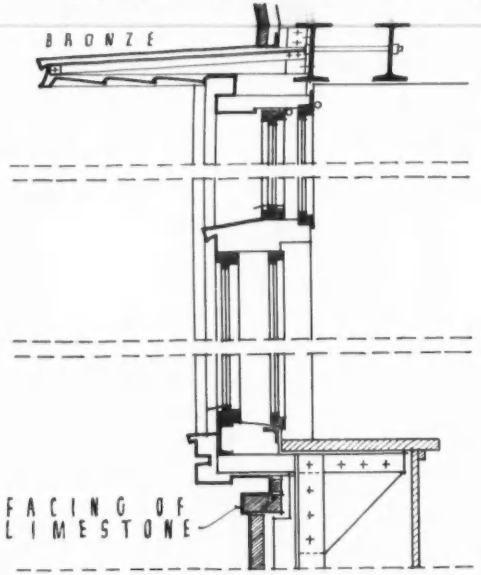
SECTION
SCALE · 16 FT · 1 IN

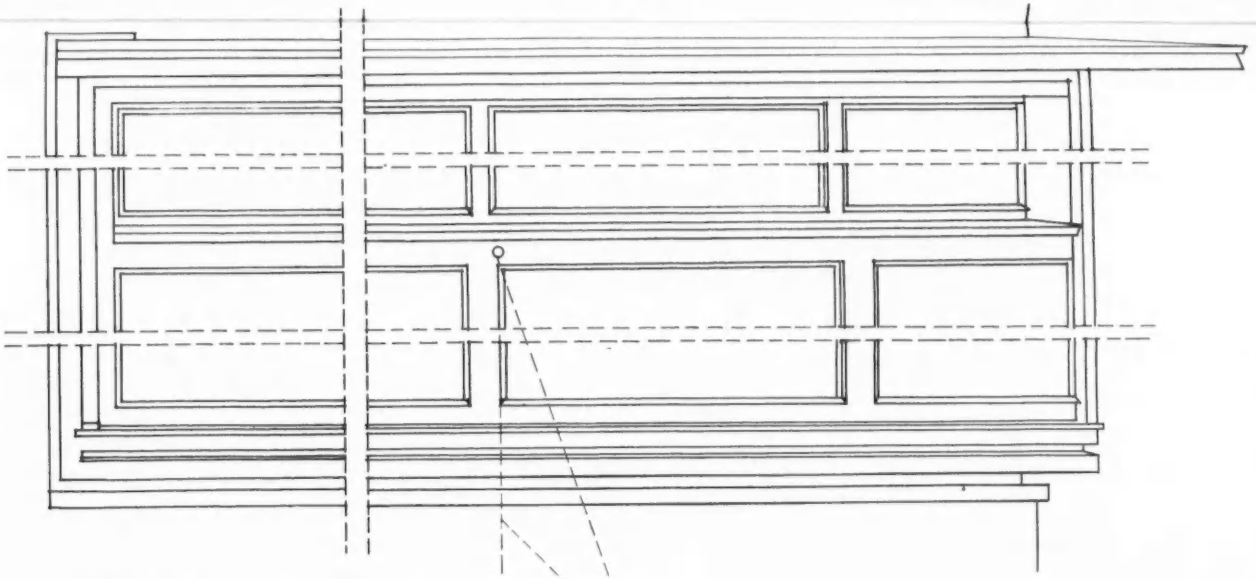


DETAILS 3/4 IN. TO ONE FOOT

PLANS OF 1ST TO 4TH FLOORS
SCALE 16 FEET ONE INCH

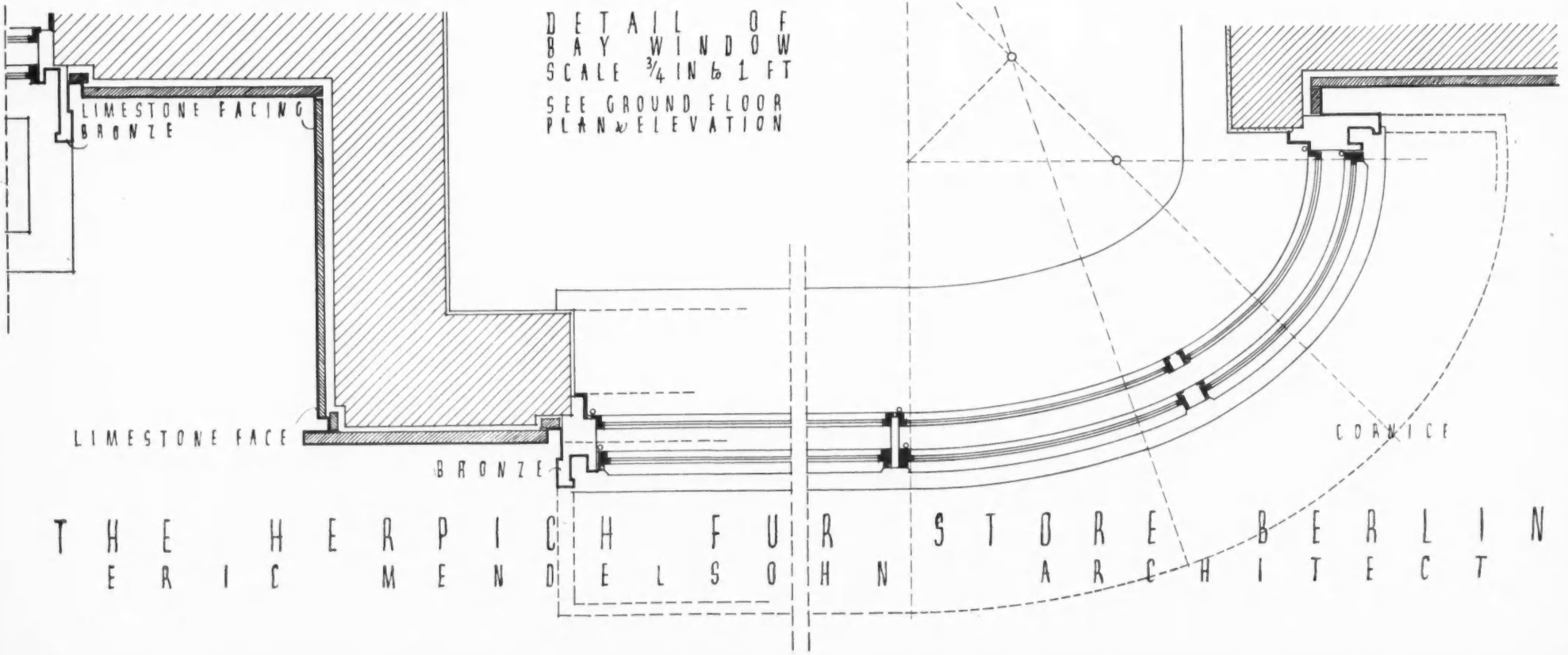
DETAILS 3/4 IN. TO ONE FOOT





DETAIL OF BAY WINDOW
SCALE 3/4 IN to 1 FT

SEE GROUND FLOOR PLAN & ELEVATION

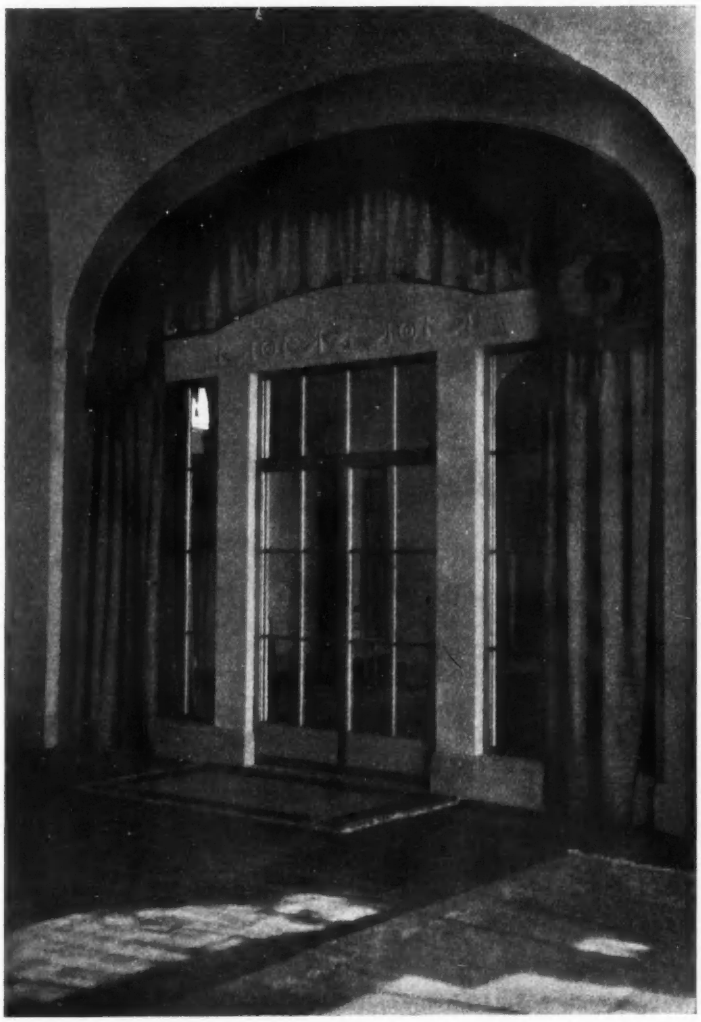


THE HERPICH FUR STORE BERLIN

ERIC MENDELSOHN ARCHITECT

WINTER GARDEN at the GRESHAM HOTEL, DUBLIN

RECONSTRUCTED FROM DESIGNS BY ROBERT ATKINSON



METAL DOORS LEADING FROM WINTER GARDEN TO BALLROOM

THE photograph reproduced above shows one end of the Winter Garden. Originally, a marble-cased fountain was incorporated in the design of this wall, but at a later date a ballroom was added to the amenities of the hotel and the fountain gave place to a pair of metal doors, shown in detail in one of the drawings overleaf, glazed with mirror glass, fixed with hardwood beads. The plaster enrichment over the doors was designed by the architect.

The shape of the ceiling of the Winter Garden should be noticed. This is vaulted on arches which employ no less than five centres—that for the main arc being struck from a point about 12 ins. below the floor. This and the other four points, from which arcs are described to complete the building-up of this very subtle curve, are indicated.

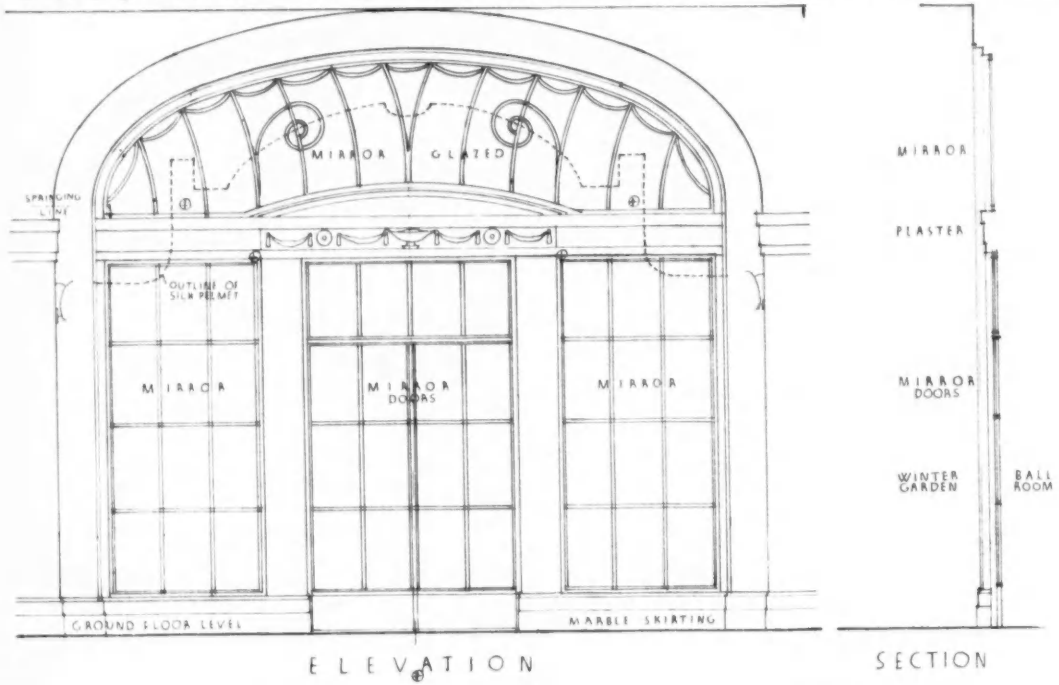
In the midst of this ceiling is a fibrous plaster ventilating grille, which is the subject of the other plate. It is also illustrated in the photograph on the last page, which shows the cast and cut glass electric-light fitting suspended from four points of the grille.

The design is based entirely on a pattern of interlacing and overlapping circles, set out on 6-in. centres from both axes of the grille. The amount of void thus left is considerable, especially as the actual "bars" which form the pattern are only 1 in. wide and $\frac{3}{4}$ in. thick. The grille is painted a pale ivory cream, in keeping with the ceiling.

GRESHAM HOTEL DUBLIN DETAILS FROM WINTER GARDEN

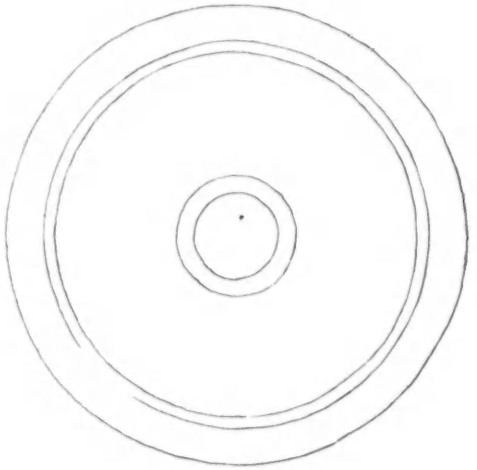
ROBERT ATKINSON
ARCHITECT

QUARTER INCH SCALE
AND HALF FULL SIZE

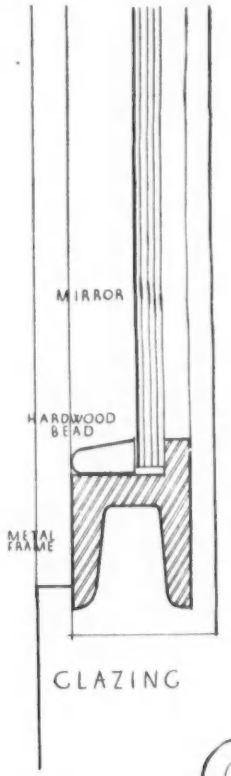


ELEVATION

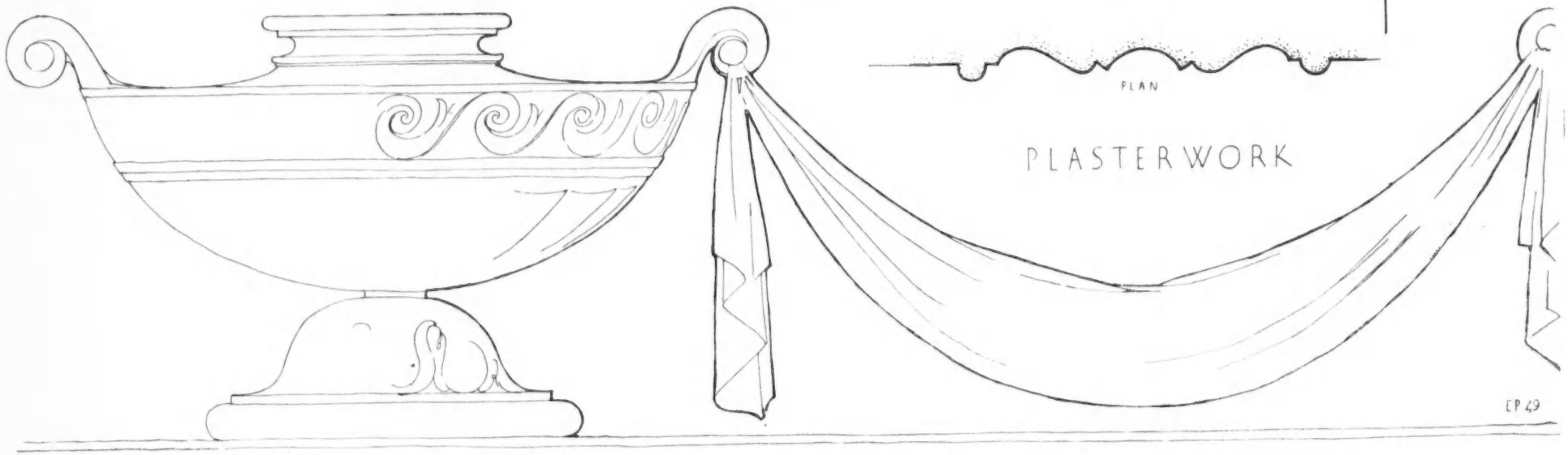
SECTION



ELEVATION



GLAZING



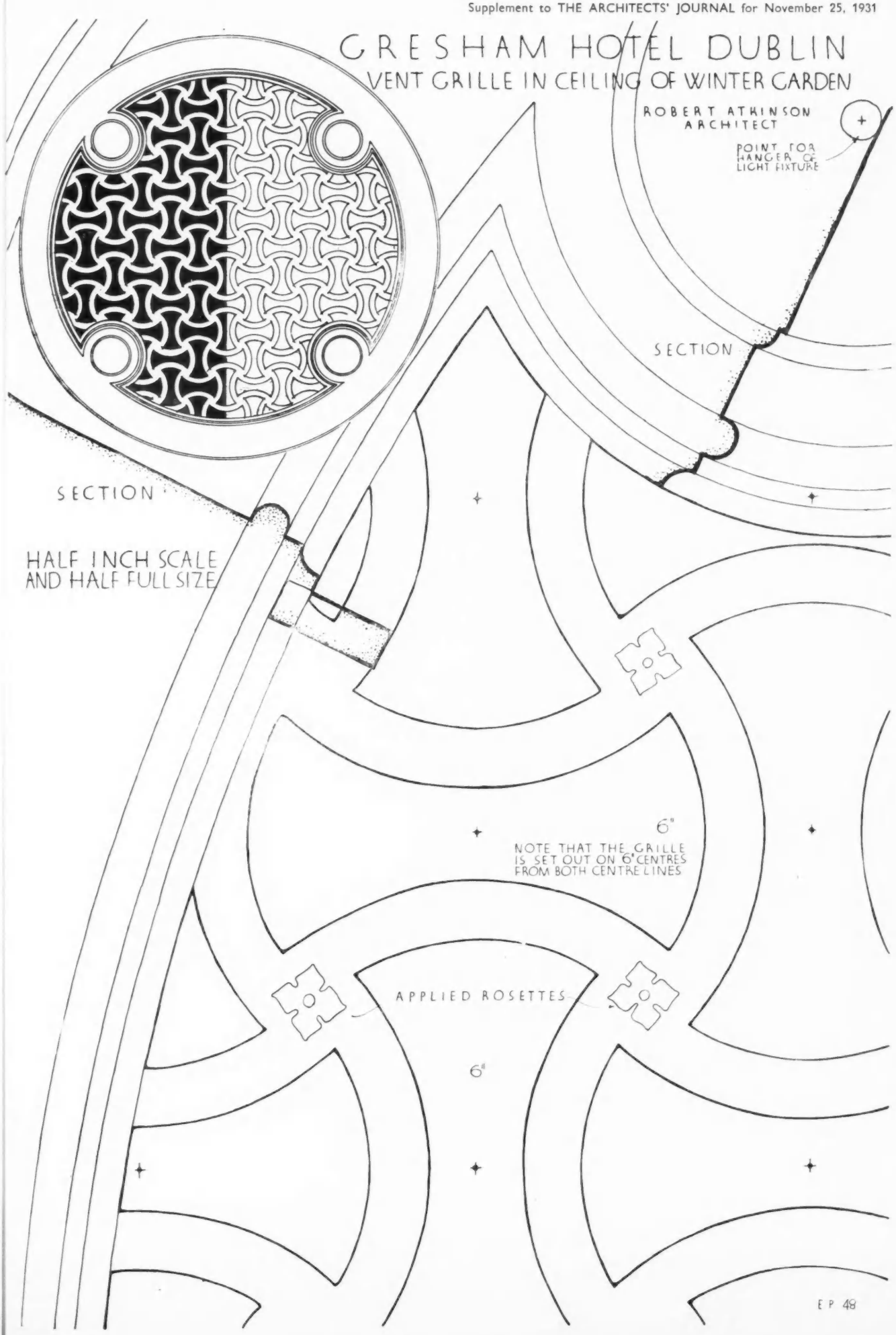
PLAN

PLASTERWORK

EP 49

GRESHAM HOTEL DUBLIN

VENT GRILLE IN CEILING OF WINTER GARDEN



E P 48

VENTILATING GRILLE AND LIGHT FITTING

SELECTED PRECEDENTS:

EXITS AND ENTRANCES

THE degree of formal emphasis evinced by a main entrance is the acid test of what may be called architectural tact. In our theatres, cinemas, and big stores this feature is only too often characterized by the most blatant vulgarity: a vulgarity that does not even possess the saving merit of being English. French influence has been almost uniformly disastrous, and never more so than when it reaches us via the United States. On the other hand, the front doors of modern English houses are nearly always either faithful replicas or composite rearrangements of eighteenth-century exemplars, which, though unequalled for well-bred reticence and quiet dignity, have no relation to the present age.

Figures **1** *and* **2** *are good, because entirely sensible, examples of German functionalism, in which purely structural details are worked into decorative patterns. Guard-rails play a prominent part in both. The curious-looking object over the lintel of the door in the latter is a vertical tubular light that acts as a directional arrow to the street number below it.*

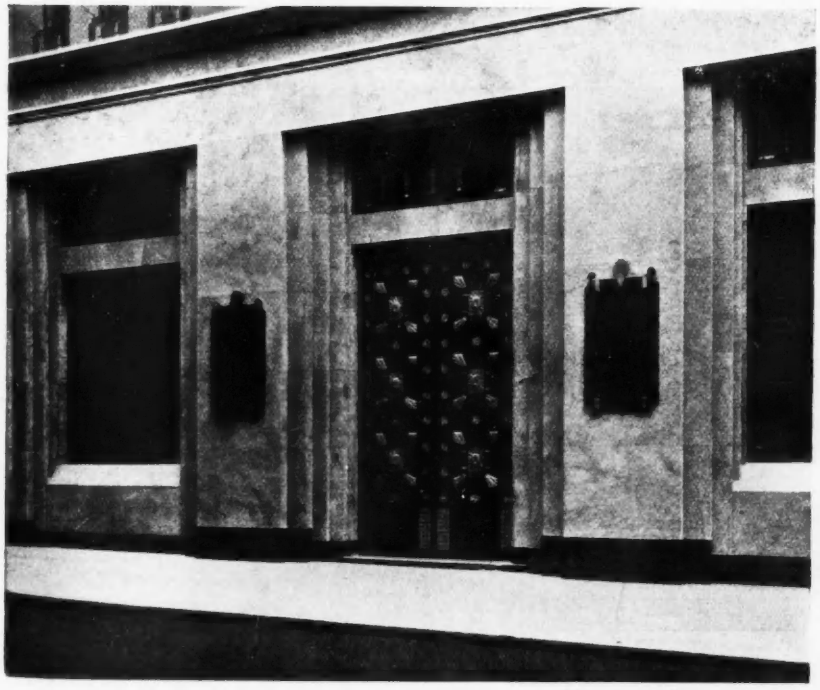
Figure **3**, *a modernist study in plain surfaces, shows that our bank directors are well aware that the stereotyped reproductions of Renaissance façades they still consider good enough for this country are no longer good enough for others. The succession of receding planes in this simple design is every bit as effective as the usual paraphernalia of carved mouldings copied from the classical crib-books, and costs far less money.*

[*Professor Martin Elsaesser, Architect.*

1. *LORRY EXIT, FRANKFORT-ON-MAIN CENTRAL COLD STORAGE*

[*Leo Nachtlicht, Architect.*

2. *THE STREET DOOR OF A VILLA, GRUNEWALD, BERLIN*



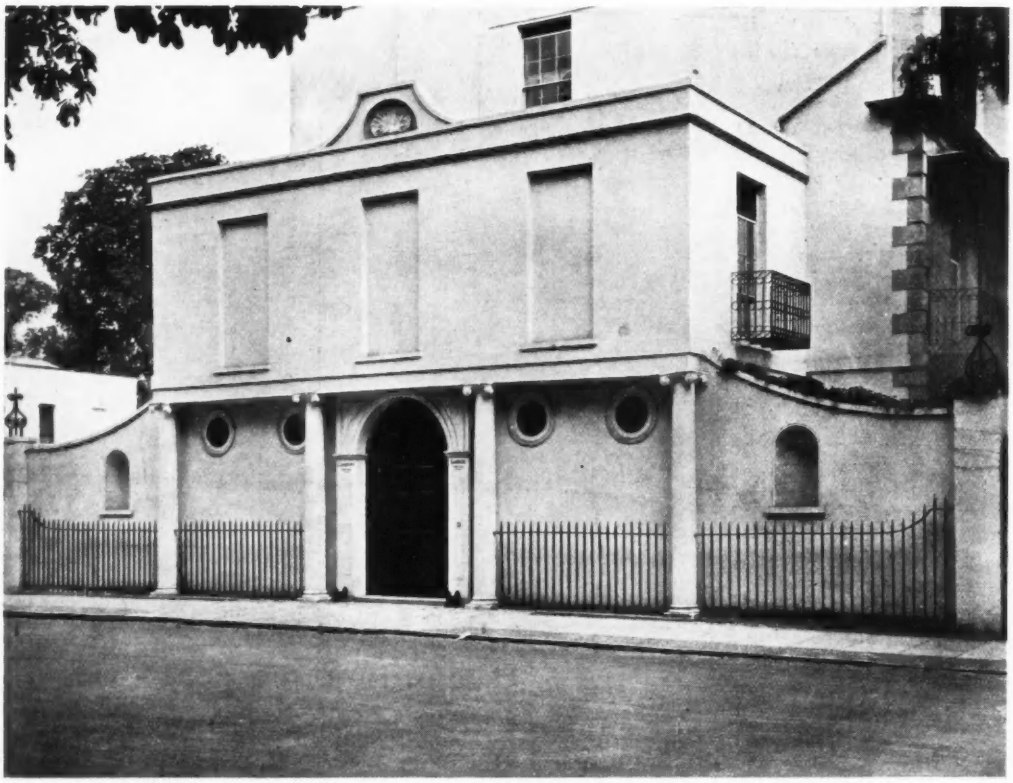
[*Prentice and Flodever, Architects.*

3. *THE MAIN ENTRANCE OF THE BANK OF SOUTH AMERICA, SÃO PAULO, BRAZIL*

Figure **4**, *however, an exquisite little Regency lodge which ought to be scheduled as a national monument, is so superlatively lovely that criticism can only gasp in admiration before it. Never have plain iron railings and plain wall surfaces been more perfectly or logically combined. Here we discover, with a further gasp, that the real English tradition and real modernism can assume identical forms. With such a magnificent example as this under our very nose, it is doubly humiliating to confess that we have not yet succeeded in evolving a national modern style of our own.*

Figure **5** *is an attempt—interesting if not altogether successful—to use sculpture that is realistic to the point of caricature as plastic relief for an otherwise severely inornate entrance. The groups of figures, representing typical scenes of hotel life, are of dull-glazed, stone-coloured ceramic.*

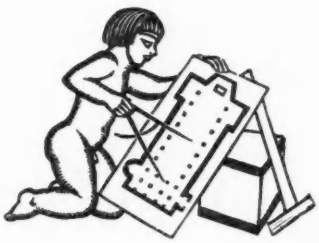
BAIRD DENNISON



4. *A LODGE ENTRANCE OF THE REGENCY PERIOD AT CHELTENHAM*

[*Concrete sculpture by Professor Vock*.

5. *MAIN ENTRANCE TO AN HOTEL AT CASSEL*



WEDNESDAY, DECEMBER 2, 1931

WASTE IN ARCHITECTURE

FROM time to time attempts are made to discover some kind of absolute standard of good architecture, as by considering, for example, the relation of construction to ornament and of form to material. It will soon be discovered that good architecture is informed by some ineffable quality that eludes such formulæ. Nevertheless, it is instructive to observe how the decadence of the main European styles of architecture is characterized by abuses of these relationships. Thus, the decay under the Roman Empire was an abuse of construction in relation to ornament; the latter being used with a profusion which disregarded fitness. The decay of Gothic was an abuse of form in relation to material, stone being used almost with the technique of wood or metal. The decay of the Renaissance was an abuse of form in relation to structure; the classic elements being deprived of their real use and significance and being robbed of their virility by the assignment of tasks unbecoming to their original purpose.

All these blemishes actually spell waste—of ornament, of material, of form. Of these, at the present time, the most prevalent is an unconsidered use of material. With the elimination of distance, due to swifter transport methods, materials are ceasing to have any local significance. Stone, brick or flint districts are becoming archæological terms. Moreover, special materials, such as fine-grained marble or delicately-figured timber, are to be obtained from any part of the world with comparatively little difficulty. Such a state of affairs not only encourages prodigality but tends to break down traditional methods of handling material. And these traditional methods that have been slowly and laboriously evolved are, for the most part, the antithesis of waste, for they exploit the material to the best purpose.

Bad design almost invariably necessitates waste of material in some way. If the properties of a material are not understood, a two-fold waste may arise—structural and decorative. For example, lack of precise knowledge as to the tensional or compressional strength of a certain timber might lead to the use of unnecessarily large scantlings; or, again, lack of precise knowledge of the purpose for which a particular timber is adapted might lead to its use in unsuitable positions.

As for decorative waste, this, too, arises where the qualities are not understood. Different stones, for example, are best worked with certain tools and in certain ways, and to each, therefore, there is an appropriate form of ornament. The same applies to timbers: a beautifully figured wood is best displayed in large surfaces, whereas another may be more suitable for carving. To ignore these considerations is to waste the material.

Wastage also occurs where a building is designed with so little foresight that it soon ceases to meet the developed needs for which it was erected; and to a still greater extent through haphazard and uncontrolled development leading to demolition long before the normal life of the building expires.

The more complex conditions become, so do the opportunities for waste of material increase. But the very term waste has no absolute significance. To us, the old builders, with their thick walls and heavy scantlings, may appear wasteful, yet, if the supply of material exceeded the demand, there was neither need nor incentive to economize. Prodigality of material is a characteristic of Nature which mankind has now learnt to cease from following. It cannot be gainsaid that the buildings which we most admire are those in which this quality is obviously absent, whether from plan or elevation.

Yet, when this has been admitted, it remains true that an assessment of waste cannot be entirely based on reason or logic. It is only when the sense of waste obtrudes itself that we may count upon it that design is at fault. We are driven back upon the reflection that good architecture depends on something elusive which evades the confines of logic, and which seems to originate from that part of ourselves from which emanate our absolute standards of goodness and beauty.

Of a truth, it is impossible to study current architecture without being conscious of a sense of waste. We see it in our suburbs in the ugly, feeble and restless ornamentation of the houses; we see it in our cities, in the inappropriate use of materials, in the degradation of architectural idiom, in the disregard of the relations of buildings to each other, so that they are not seen to the best advantage; we see it in the design of our streets, where architectural efforts are wasted through lack of co-ordination.

In a time of economy, let us learn what economy means.

THE KEEP, CASTLE HEDINGHAM, ESSEX

"It was not," says Mr. Edward Sackville West, in his review (see pages 735-8) of Mr. Nathaniel Lloyd's book, *A History of the English House* (The Architectural Press, price £3 3s. net) "until the passing of the need of defence relieved the great from the necessity of living in fortresses, the architecture of which was entirely dictated by . . . comparative impregnability, that people were able to turn their attention to comfort and æsthetic considerations."

One of the earliest of these Norman strongholds was Castle Hedingham, built c. 1130, some forty-three years after the Tower of London. Contemporary with Rochester Castle, its keep is better preserved, though the embattled parapet and two of the four turrets have been destroyed.

Mr. Sackville West makes the very interesting observation, in summing up present tendencies in domestic architecture in America and on the Continent, that the larger modern buildings "exhibit, in their huge, grim bareness, a return to the twelfth-century castle, minus the fortifications—and the execrable taste, at any rate in England—of their exterior decoration."

NEWS & TOPICS

A VITAL QUESTION FOR ARCHITECTS

SPEAKING to the Institute of Structural Engineers, Mr. W. T. Creswell enlarged upon the position of the structural engineer in relation to building contracts, and suggested that he should be employed directly and separately by the employer, taking full responsibility for the stability of the framework, and leaving the clothing of it to the architect. This is a vital matter to architects, to whom responsibility is as the breath of their existence, and the means and power by which they exercise a *controlling* influence over the whole of a work, in all its parts. In practice, the structural engineer, be he private practitioner or member of a commercial organization, takes the responsibility for his work under the architect, though in the last resort the architect must take the blame for the consequences of failure, and it is doubtful, I think, whether the division of responsibility will react to the welfare of architecture if it leaves the architect a mere ornamenter and internal organizer.

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If, indeed, steelwork or reinforced concrete has become half the matter of building, then the architect must and will become master or controller of these, or cease to be an architect, a constructor. The one thing you cannot do is to say this man will be responsible for the construction, and this man looks after æsthetics and what not. Such practice would represent a misconception of the elemental laws governing the design and execution of structures. Nevertheless, the problem exists to be solved, and seems to call for a rather prompt answer from architects.

PROFESSIONAL STATUS IN THE IRISH FREE STATE

Architects in the Irish Free State are taking steps towards registration. A Bill is being prepared and will be taken to Parliament. I hope, very sincerely, that they will get a really thorough measure upon their Statute book—one that preserves for themselves the right to the only one word that properly describes an architect to those who require him—namely, "architect." If they are very lucky, they may make it impossible for any plan to go before any local official without the signature of a qualified architect, as happens, I was told recently, in parts of Canada. Whatever they do, it must, I feel, be a thorough measure of protection if it is to be of real use to either the public or to the architectural profession.

STREET ARCHITECTURE

Mr. Howard Robertson, in his paper on "Street Architecture," read at Monday's meeting of the R.I.B.A., made some interesting remarks about the floodlighting of buildings in London during the International Illumination Congress. He thought that the floodlighting served to stress their virtues and to show that architecture, strong and bold, is a necessity in certain key positions of the city plan. But he asked his audience to suppose that instead of upon St. Paul's, the Tower, Big Ben, Thames House, etc., the engineers had turned their batteries upon the architecture of the Strand, Victoria Street, Shaftesbury Avenue and Tottenham Court Road. What then? A few people might have come to scoff, and fewer and fewer still would have remained to pray—for the lights to be switched off!

The odd thing is, as he said, that in the daytime, we accept without dismay the architecture of these and other streets like them, architecture nearly always dreary and often ugly, coarse, mean-spirited, pretentious, or vulgar. It was in the streets of the last seventy years that the chief offenders were to be found; they reminded us, in our lucid moments, of the degradation to which architecture had been subjected. And by their multitude, their air of settled familiarity, they induced the coma and lethargy from which neither public nor architects seemed able to rouse us. The greater the need then for such discriminating measures as the award of the medal for street architecture, year by year, presented on this same occasion to Mr. Arthur Davis, for the Westminster Bank, Threadneedle Street.

MR. GLEAVE HONOURED

The brilliant achievement of Mr. J. L. Gleave, the winner of the Columbus Memorial Competition, was celebrated by the Manchester University School of Architecture, of which he is a past student, by a dinner given in his honour, on November 28. Professor Dickie, in proposing his health, said six months before the closing date of the competition, Gleave left school, and started on his design. He finished it: and then, ten days before the last day for submission of designs, he had a sudden inspiration. With amazing courage, he scrapped all his drawings. The design submitted was the product of those last ten days. It was good enough to place Gleave in the last ten out of the 456 competitors—many of them famous architects—from all over the world. Gleave had been ably assisted in his scheme by Eric Kennington, who had designed a series of sculptures illustrative of the life of Columbus. Finally, Professor Dickie read an extract from a letter written to Gleave by the technical adviser on the competition: "You won hands down. Your design was in a class by itself." Dr. Raymond Unwin, P.R.I.B.A., who was also present, announced that Mr. Gleave had been elected an associate member of the Institute, holding that no examination it could set him could equal the task he had overcome. What better tributes could a competition winner expect?

TOMBSTONE DUMPING

As a counterblast to the leading article of last week, let me make mention of tombstones, imported tombstones of marble and choice granite. They enter this country in alarming quantities, and it is perfectly safe to say that 99·99 per cent. are of a hideousness which we could only properly assess were our senses not dulled by years of contact with the accursed things.

*

For the sake of our good name, I could never hope that we should learn to make as bad tombstones ourselves in order to keep money in the country, but we might—or the granite and stone quarriers might—organize an educational campaign for better-designed English tombstones, and employ architects to produce some designs for them. Propaganda directed to the specialized quarters where tombstone choosing is effected could alter the complexion of the matter in a very few years. As it is, we deserve to have the beastly things dumped on us. We have no taste in tombstones.

CREEPERS FOR DECENCY

A little argument for and against creepers on houses is wending its way through the columns of *The Times*. It is quite a pleasant debate, in no way bitter, as in days past the same subject has been provocative of bitterness. Indeed, both parties seem agreed that English domestic architecture, generally considered, is in need of a covering of creeper. In fact, that it doesn't half need covering. And when I come to think of several square miles in Wembley and Harrow that I know of, and several olde English Tudor residences in Surrey, and many and many other causes for distress, I ask myself, not why not cover these decently with creepers, but why has there not been founded a strong society for the suburb-wide distribution of hardy, unkillable, galloping creeper. This is a work to be done.

MORE SITES FOR STATUES

The alarming multiplication of those Tom-Tiddlers' grounds known as traffic circuses, of which Cambridge Circus is the latest, must be making sculptors whet their chisels in anticipation of a big boom in orders. In Berlin they are solemnly turfed and planted with dwarf shrubs; but one cannot somehow imagine our civic authorities encouraging experiments in landscape gardening inside their magic circles. So I am afraid that the demand for "sculptural embellishment" will have things all its own way. The logical accompaniment of gyroscopic traffic is clearly the gyroscopic statue, revolving in tempo with the whirling wheels, and halting statuesquely when the red lights flash to indicate that it is comparatively safe for pedestrians to cross.

*

In point of fact, revolving statues of this type might advantageously replace both traffic police and traffic signals. They could bear those alternating lights in gesticulating hands, or as garlands upon their brows. And at night they could be flood-lit in "Go," "Caution" and "Stop" colours. Frankly, this coming glut of sites for better and brighter statues fills me with considerable apprehension. Nor do I see why these glorified street refuges should become the monopoly of carvers of stone and moulders of bronze. The architects ought to be given an equal chance. There is at least one type of small building for which these halcyon isles in the troubled seas of London's traffic are peculiarly well adapted : the mortuary chapel.

MOTORING IN FOG

Most architects are motorists, and will be interested to learn that, at the recent International Illumination Congress, held at Cambridge, the fallacy of using a yellow light to improve penetration during fog was raised by the Automobile Association's representative, and unanimously supported. Fog contains minute droplets of water which act as lenses; consequently the more powerful the illumination, the greater the reflection. Coloured rays merely reduce the intensity of the light, and are useless as an aid to visibility. The A.A. advocates a fog lamp on the near-side dumb-iron, or a spot light attached to the nearside pillar of the windscreen; thus the driver is able to look either over or under the beam. If caught in fog without such a lamp, it is recommended to extinguish the offside headlamp and direct the other headlamp beam on the near side of the road : this method necessitates driving close to the near-side kerb. Tissue paper attached to the outside of the headlamp glasses, or whitening mixed with water, will be found helpful. Either of the foregoing is easily removed. By the way, all motorists are now required to sign their driving licences; using an unsigned licence may involve a fine up to £5. ASTRAGAL

Competition Result

Miss Helga Richards, of 3 Southfield Avenue, Street Lane, Leeds, has been awarded the premium of ten guineas in the competition for a pictorial map of the area of the West Yorkshire Society of Architects.

The safety curtain at the Cambridge Theatre, Seven Dials (Wimperis, Simpson and Guthrie, architects), designed by G. W. Leech, illustrates the traffic centre from which the district takes its name. Astragal, taking his text from Cambridge Circus, near by, has a whimsical suggestion to make for gyratory statues at London's traffic circuses.

NORTH END HOUSE, W.

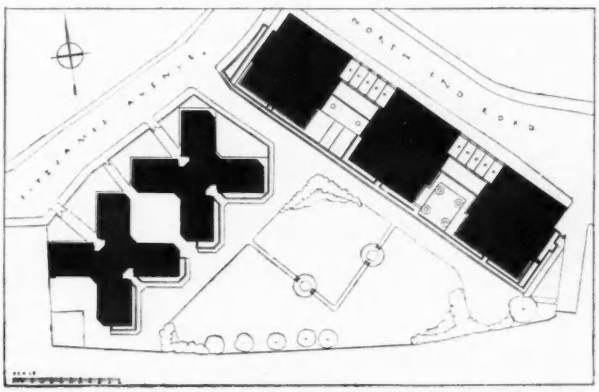
DESIGNED BY MESSRS. JOSEPH

Looking from the staircase hall, illustrated on page 733, towards the entrance vestibule in one of the north-east blocks. The flats are entered from the garden.

SITUATED as these blocks of flats are, amid the crowd, the buzz and the murmurings of a densely populated district of London, within a stone's-throw of Olympia, there is a charm in the quiet of the inner garden, a cessation, a coolness from business, an indolescence almost cloistral, which is delightful. Even the sight of the trees, fortunately preserved by the architects, readily brings to mind the wise words of Jane Austen " to sit in the shade on a fine day and look upon verdure is the most perfect form of refreshment."

But this is not all. The scheme is undoubtedly one of the most successful attempts yet made to provide small flats with all the amenities and conveniences of modern luxury flats at moderate rents. The accommodation and the labour-saving appliances make a formidable list.

In even the smallest flat are a hall, coat cupboard, living-room, with fireplace and flue for coal fire, dining recess, wine cupboard, a tiled bathroom (with lavatory basin, heated towel rail and w.c.), linen cupboard, tiled kitchen with cupboard and enclosed dresser and sink, two reception rooms and w.c. There are from two to four bedrooms, one being installed with a lavatory basin. Central heating is available in the hall and living-room, electric heating points are provided in the hall, living-room, dining recess, reception and bedrooms, and gas is laid on in the living-room and kitchen. A frigidaire point is also supplied to the kitchen from a central source.

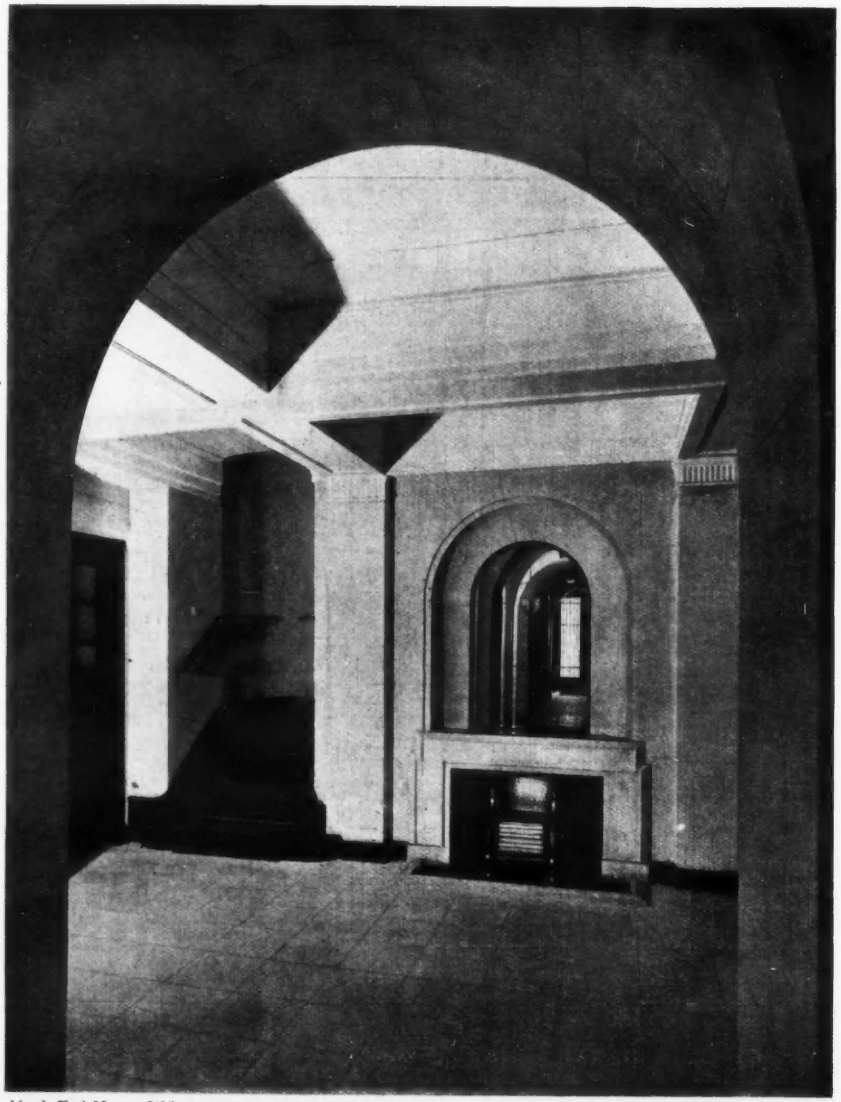


Block plan. The site is a few minutes' walk from West Kensington, Baron's Court, Olympia, and Addison Road stations.

Then, as in the modern luxury flats, special attention has been given to the design of the entrance halls, landings and staircases. Electric passenger lifts are installed, and separate staircases and lifts are provided for the servants and tradesmen.

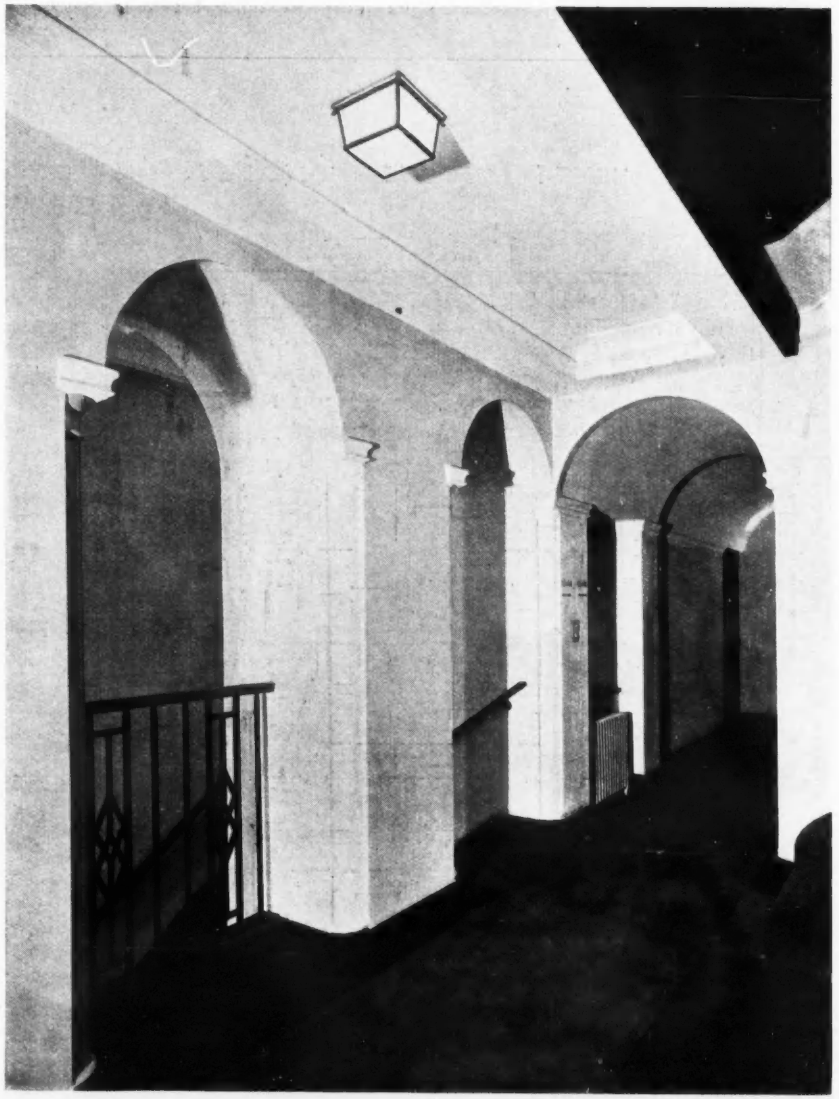
A view of two of the north-east blocks, taken from one of the south-west blocks. The garden, planned by the architects, has several fine trees and covers a considerable area of the site. The scheme forms one of the most successful attempts yet made to provide small flats with all the amenities and conveniences of modern luxury flats at moderate rents.

A view of two of the north-east blocks, taken from one of the south-west blocks. The garden, planned by the architects, has several fine trees and covers a considerable area of the site. The scheme forms one of the most successful attempts yet made to provide small flats with all the amenities and conveniences of modern luxury flats at moderate rents.

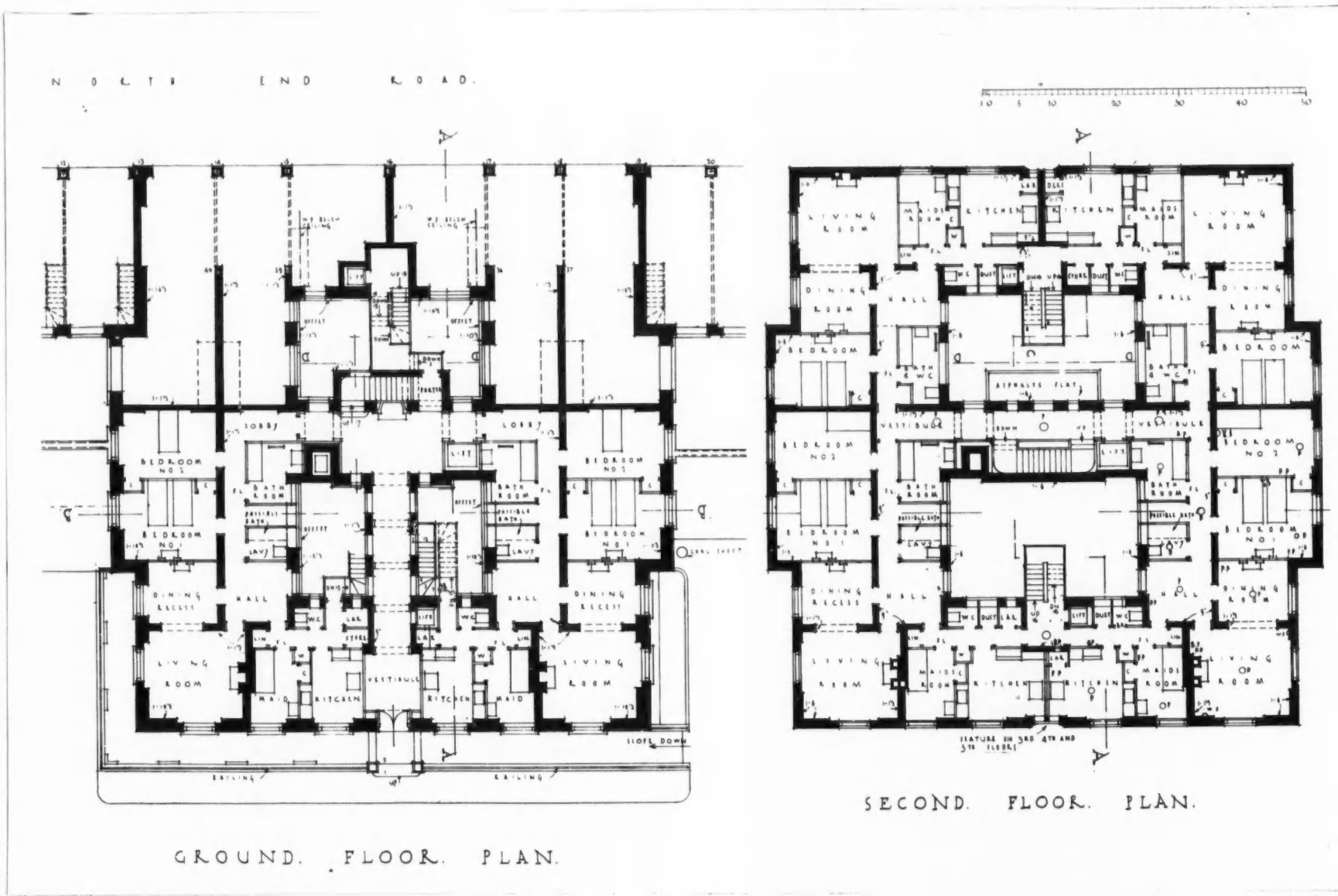


North End House, W.]

In a north-east block : a ground-floor staircase hall and a first-floor landing. As in the modern luxury flat, each block is provided with electric passenger lifts with uniformed attendants, and separate staircases and lifts for the tradesmen and servants. The staircase hall is photographed from the end of the main entrance corridor illustrated on page 731.

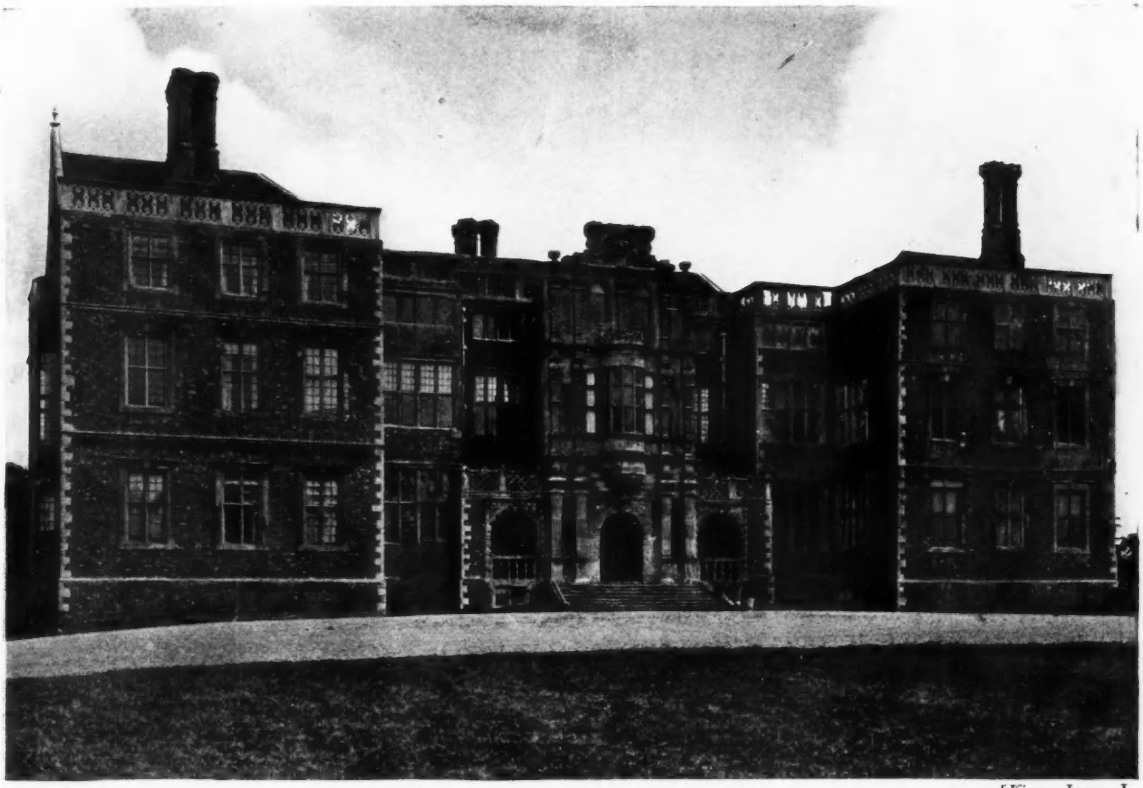


[*By Messrs. Joseph.*



North End House, W.] [*By Messrs. Joseph.*

North-east block : plans of the ground and second floors. The flats are specially designed so that all the reception rooms, bedrooms and kitchens are on the outside walls, to obtain the maximum of light and air, and the windows have been made exceptionally large. On the ground floor, facing North End Road, are lock-up shops.



[*King :* James I. *c. 1606.*]

Bramshill, Eversley, Hampshire, from the south-west. Like most Elizabethan and Jacobean houses, Bramshill has an imposing entrance, the design of which is more than usually original in its conception.

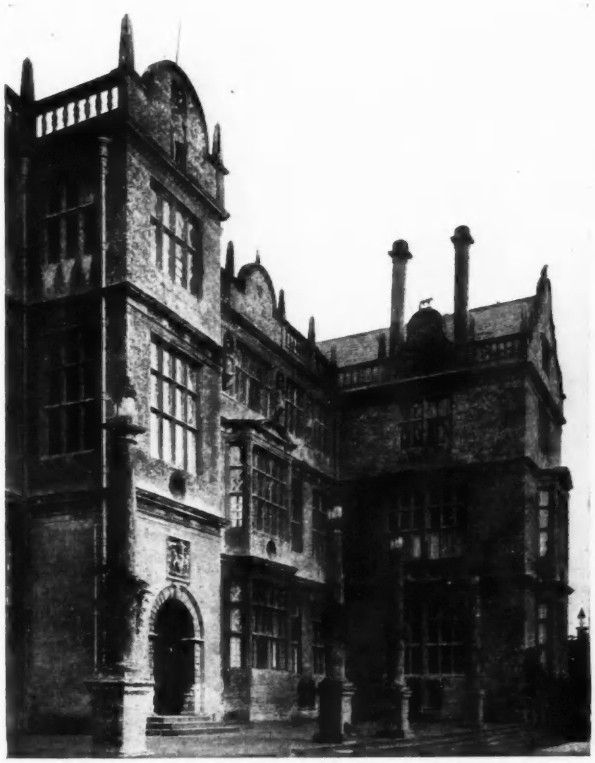
A HISTORY OF THE ENGLISH HOUSE

Reviewed by *E. Sackville West.*

BY NATHANIEL LLOYD, O.B.E.

THIS is an important as well as a beautiful book; for there have been few, if any, works of this kind, dedicating as it does equal importance to the development of domestic comfort and amenity in the English house and to that of the purely architectural side. A more fascinating subject it would be hard to find; and the fact that it is also highly complex does not detract from the fascination.

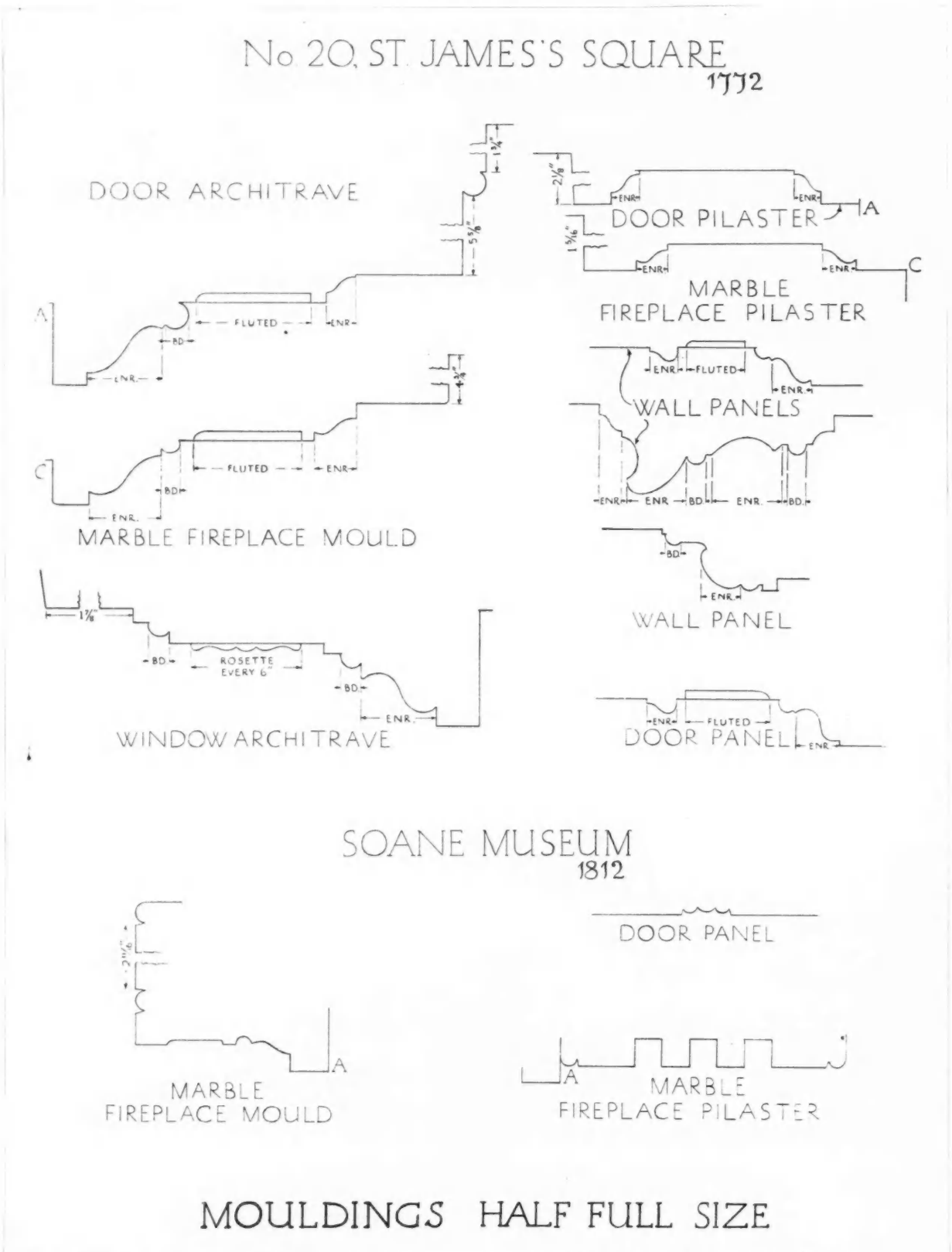
Mr. Lloyd begins at the beginning, and shows that the great hall, which underwent various transmogrifications up till the eighteenth century, was from Saxon times the basic fact round which all large houses were built. The Roman type of house was clearly unsuitable to the English climate, and disappeared with its inventors, leaving the Saxons to introduce a style of which no example remains, though some of their churches, which show a clumsy effort to imitate timber-work in stone, may give some idea of what they were like. Contemporary drawings, however, show a curious resemblance to the typical Provençal house, with its violently ridged tiles. For some time, also, hut-like houses continued to be built in Ireland and the west of Scotland; Mr. Lloyd's plates show them to be comic in effect, like stone haystacks.



[*Queen :* Elizabeth. *c. 1580–1600.*]

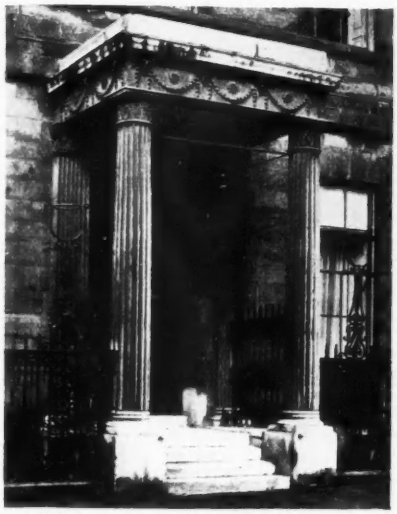
Montacute House, Somerset. Detail of south front and terrace.

With the advent of the fortified manor-house, under Henry II, we see the beginnings of the type which was to develop, through the mediæval castle, into the elaborate dwellings — often more like a close village than a single house—of the sixteenth and early seventeenth centuries. During the Middle Ages no distinction is observable in architectural style between church and domestic architecture (a phenomenon reintroduced by the Gothic Revival); it was not until the passing of the need of defence relieved the great from the necessity of living in fortresses, the architecture of which was entirely dictated by ease of defence and comparative impregnability, that people were able to turn



From A History of the English House.]

Various mouldings from No. 20 St. James's Square and the Soane Museum, No. 13 Lincoln's Inn Fields, London.



c. 1769.] [*King :* George III.

Chandos House, Chandos Street, London, W. Robert Adam, Architect.

their attention to (1) comfort, and (2) æsthetic considerations.

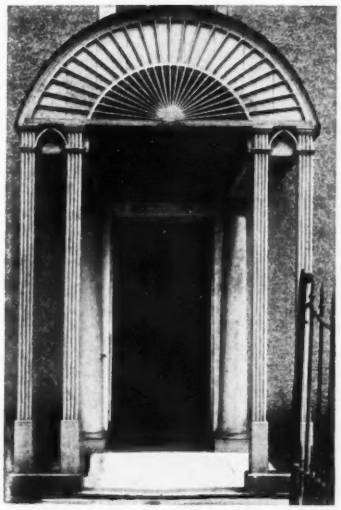
The actual designers of these castles remain for the most part obscure, the reason probably being that there were always several engaged on each castle: first, a master-mason and carpenter, afterwards a host of master-craftsmen in their own particular spheres. That many of these castles were in their way superb, an example such as Castle Hedingham (a fine photograph of which figures in this book) suffices to show; and many of the adulterine castles built under King Stephen were equally fine.

With the opening of the thirteenth century we see the first glimmerings of comfort and amenity being introduced into the castle; from then until the final flowering of the eighteenth-century small house, the history of domestic architecture is in no small degree the history of the development of privacy and comfort. Not until the rise of the decorative style in the fourteenth century and its emergence into the Perpendicular, did the idea of a house as an æsthetic whole dawn in the minds of English architects; and even then the owner was apt to wreck the design by the haphazard addition of rooms, passages, etc., which by no means hung together with the original whole.

It was now, too, that the desire for privacy began to appear with the general improvement of manners, and the toning down of a life which must, on the whole, have had an odiously barbaric atmosphere about it. In early days the castles were not, in a proper sense, private; the enormous number of dependants ate with the lord and—quite often—sat with him. The building of rooms for the private use of the lord and his family increased gradually from the fourteenth to the sixteenth centuries, when it reached its fullest development. Various attempts, Mr. Lloyd points out, were made to check this tendency (notably by Henry VIII), but they were fortunately vain. Thus, gradually, the central hall, hitherto the most important room in the house, and stretching from the ground floor to the roof, sank in importance, and often ended, as at Knole, by being ceiled, to make space for more rooms above it.

There can be no doubt, I suppose, that the astonishing flowering of English architecture (begun under the auspices of Henry VIII) in the sixteenth and seventeenth centuries, was the most important in every way that England has yet known. Beside the glories of such houses as Haddon and Montacute and (much later) of Queen's House, Greenwich, the grandiosities of the Vanbrugh style seem vulgar and unsuitable. To an epoch which produced such buildings as those (profusely illustrated in Mr. Lloyd's beautiful plates) it is possible to forgive the fussiness of detail—introduced by an army of Italian workmen as well as by architects like Sir Henry Wotton, whom the Renaissance had attracted to Italian travel—which spoilt so many of them, inside and out. England had to wait for the genius of Inigo Jones to sweep away the masses of bastard decoration, which damaged the appearance of such houses as Bramshill (in many ways still so lovely) and Wollaton Hall and Hatfield and Burghley.

Thereafter, Italy possessed the imaginations of English architects, until the Gothic Revival came temporarily to oust it. The result was, on the one hand, vast palaces of the type of Blenheim and Castle Howard; on the other, that perfect ideal of English



Late 18th and 19th Centuries.] *King :* George III.

The White House, Chipping Ongar, Essex.

c. 1775.] [*King :* George III.

Porch in St. James's Street, London, S.W. J. Crunden, Architect.

comfort and discreet beauty, the late-seventeenth- and early-eighteenth-century house. For the latter conforms more exactly to what may be called the *idea* of a dwelling than anything that preceded it in England. One of the reasons for this was the doing away of the passage-room, and its replacement by the passage, as a mere means of communication between separate rooms, all of which thereby gained in privacy. In the houses of the immediately foregoing age the rooms tended to run straight into one another, in a disagreeably public manner.

The other side of the picture is less reasonable; for it is difficult to regard the immense piles which the late seventeenth and early eighteenth centuries erected, under the inspiration of Italian palaces and of Versailles, as, *qua* houses, anything but a colossal mistake. Looking at them, one expects to learn that they are Government buildings, museums, or even very grand railway stations. And the chief trouble is that the interiors confirm one's impression. That Elizabethan and Jacobean houses were frequently enormous is not an answer to this criticism, for the simple reason that they contain an infinite number of relatively small, liveable-sized rooms, in which it is possible to carry on a private existence.

Vanbrugh's vast palaces are magnificent enough, regarded abstractly as architecture; but regarded as dwellings, even when the ceremonious life of the aristocracy of the epoch is taken into consideration, they are not much more suitable—from the English point of view—than Louis XIV's stately but otiose residence. The whole point of English houses, from the fifteenth century onwards, has been the improvement

c. 1605.] [*King :* James I.

The solar (now called the ballroom) at Knole, Sevenoaks, Kent, one of the few remaining early-seventeenth-century rooms, which, notwithstanding its later furniture, presents some resemblance to its original appearance.

of homeliness, easiness and an atmosphere of domestic amenity, combined with, but never sacrificed to, a fine decorative display. But the first Duke of Marlborough, imbued with the usual megalomania of the parvenu, thought otherwise; and the result was as portentous as anything he could have imagined. For the wish for such houses can only be ascribed to a desire for display run mad. No doubt we should be grateful to the fulfilments of this desire in the magnificence of the *coups d'œil* they produce; our contention is simply that they are no more *houses* than they are *English*, falling as they do right outside the saner traditions of English grandeur as suited to English people and the landscape of the English countryside.

It is pleasant to notice that Mr. Lloyd does full justice to the many charms produced by the Gothic Revival; but we think it a pity that he stopped there and did not continue his history and his plates down to the present day. The result would not have been very pleasing—though the rather grim, box-like stucco houses erected in the 1830's are frequently charming as well as comfortable.

c. 1790.]

A house and shop at Witham, Essex.

Even if he had wished to omit twentieth-century Queen Anne some critical commentary on the latest developments, such as we are now undergoing from the *avant-garde* architects of France, Germany and Holland, accompanied by a few plates, would have been very welcome. He might have pointed out the disparity between the various excellences of the larger of these modern buildings, which in their American and Continental prototypes exhibit, in their huge, grim bareness, a return to the twelfth-century castle minus the fortifications—and the execrable taste, at any rate in England—of their exterior decoration.

But these criticisms are unimportant when compared with the manifold excellence of the book as a whole, which must make it a delight alike to specialists and to amateurs of the subject.

THE MOUNT SCHOOL, YORK

Centenary Hall

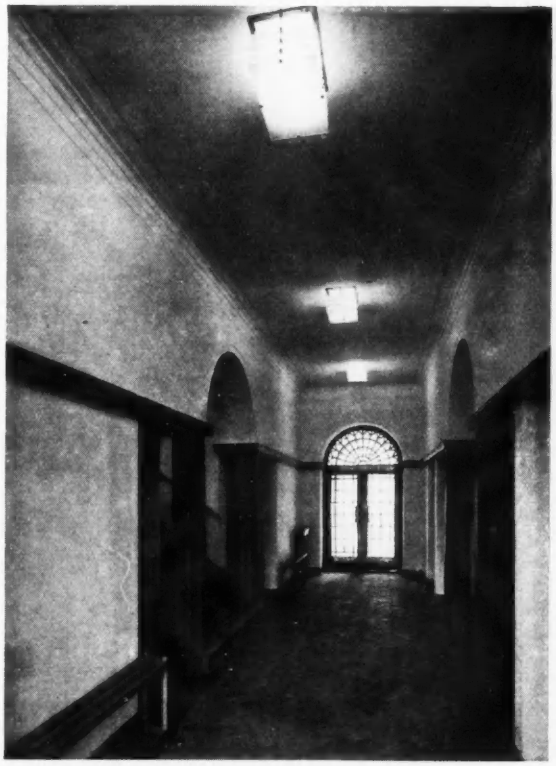
DESIGNED BY HUBERT LIDBETTER

THIS building was the result of a competition for a hall to celebrate the centenary of the Mount School, which was founded by the Society of Friends in York in 1831.

The hall had to be added to the end of the present long range of buildings, and is approached by a central corridor at two levels. The main floor is above the ground, and the connecting corridor between the hall and the school descends to the foyer and ascends to the gallery. This gave ample supervision and easy access from both levels, as will be seen from the plan on page 740.

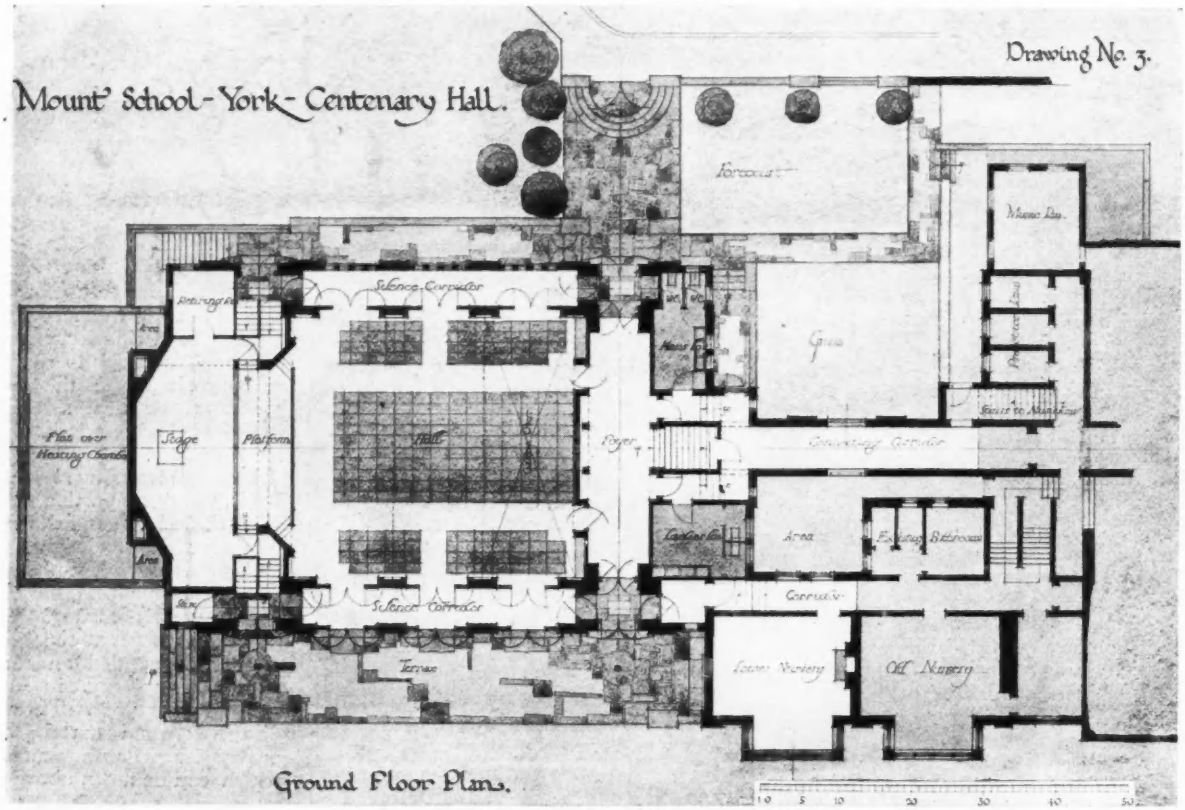
The stage was placed at the opposite end of the hall from the school, with the retiring rooms under. Access to the stage and retiring rooms is by means of corridors on each side of the hall. The corridor on the garden side would also serve as access to a swimming bath, which it is proposed eventually to build around the heating chamber behind the stage. The corridor on the road side serves as a "silence" corridor to exclude undue noise from the main road, and on this side also there are double windows on the clerestory.

The stage is arranged in two levels, the front portion being at platform level, and the back portion at full stage height, with an extension over the platform for the larger performances. The stage is arranged for curtains of grey material; these can be dismantled and ordinary scenery put in their place, as required. There is also a cinema curtain and provision for a fireproof curtain, which can be flown above the stage.



The foyer, looking towards the doorway to the terrace. The staircase is on the left, and faces the entrance to the hall.

The main entrance front, as seen from the road. The walls are of local York 2-in. bricks, with brown York stone dressings. The windows on the right, of the steel casement type, light the "silence" corridor adjoining the hall.



Ground-floor plan. The floors are oak, the woodwork throughout being of American whitewood, except the external joinery, which is in mahogany, stained to match the whitewood. It is proposed eventually to erect a swimming bath around the heating chamber.

Looking from the stage towards the gallery. Seating has been provided for 250 persons on the ground floor and a further 100 persons in the gallery. Ventilation is by means of induced tempered air, with natural outlets in the clerestory windows and vents in the ceiling.

Mount School, York.]

A general view of garden front, showing terrace, which is of grey York paving, and, on the right, the nursery buildings. The whole of the doors on this façade give direct access to one of the two "silence" corridors. Extensions were also made to the nursery block.

The stage is arranged in two levels: the front portion being at platform level; and the back portion at full stage height, with an extension over the platform for larger performances. The curtains can be dismantled. Acoustical panelling has been used for the ceiling.

By Hubert Lidbetter.

LETTERS FROM READERS

"Dreadfully Disappointed"

SIR,—I have read a good deal of what Mr. Creswell has written during the past few years. That reading has forced me to the conclusion that Mr. Creswell is a dreadfully disappointed man, and that he wants to assure us all that when we are as old as he is we shall all be dreadfully disappointed too.

But until we reach that age—which I gather to be one of almost perfect wisdom—we shall not be in a position to give Mr. Creswell the lie direct. In the meantime, I am hoping that things won't be as bad as Mr. Creswell says they will. I have met a number of men who must be as old as Mr. Creswell, or possibly older, who are not dreadfully disappointed men, and so I have some reason for still hoping that Mr. Creswell isn't quite right after all—but perhaps their sense of values is not quite the same as Mr. Creswell's.

In any case, it's dreadfully sad to see Mr. Creswell so dreadfully disappointed.

JAMES BURFORD

Bernard Whistlow, F.R.I.B.A.

SIR,—I thank Mr. Creswell for taking me so seriously, and I gladly adopt the "boy-straight-from-school" status that he has given me. I thank him for pointing out how my youth prevents me from having his experience.

I am sorry that my well-meant remarks about commercial travellers should have touched him in such a tender spot that he counters them by pointing to this youthfulness of mine, which must have been so obvious in my letter.

My intention was to help Mr. Towndrow to appreciate Bernard as I do, and I am very happy indeed to have unwittingly drawn Mr. Creswell's fire in the shape of his charmingly serious letter, which I am sure will have a great effect on all the other boys at my peculiarly impressionable time of life.

HAROLD GREENWOOD

The Seven Sisters Ramp

SIR,—It relieved my spleen to read Astragal's recent note on "The Seven Sisters Ramp," of which I have been one of the hapless victims.

The procedure was much as he describes. I had no idea that I was committing a technical offence by leaving my car out of other people's way, off the road, as I had been accustomed to do in years gone by. I received no warning of any kind whatever before that local policeman of his popped out from behind the gorse bushes, note-book in hand and pencil ready licked. I suggested that even the dog has been held to be entitled to his first bite. But he insisted on transacting business, copying from my licence with more zeal and labour than accuracy. Thereafter he was pleased to unbend a bit and volunteered the almost incredible information that the trap was actually set in operation at the direct suggestion of the National Trust.

In due course I received a summons, with my name incorrectly spelt; but that did not prevent the local bench from imposing a fine—a proceeding the legality of which I doubt. But of course to fight would have cost time and money; and I took the line of least resistance, smarting under a double injustice.

"DY 2257"

Another Confidence Trickster

SIR,—Astragal's note in the JOURNAL for November 18, on "A Confidence Trickster" constrains me to describe a variation of the trick which was played on me a few weeks ago here in Edinburgh.

A well-dressed man, about forty-five years of age, rushed into my private room one day and seized me by the hand, claiming acquaintance with me.

I had no recollection of ever seeing the man before, and told him so.

He stated that he had been for many years with a well-known firm of engineers, with whom I had formerly done business.

He was now dealing in motor accessories and would be glad to do business with me.

After a long chat about the old firm he rose to go and suddenly found that he had left his purse at his hotel. Could I lend him 2s., which he would return without fail next morning at 10 a.m. before he left town?

Needless to say he has not yet returned with my 2s. Of course he may have been killed in a motor accident.

Such a trick might be played with great success for a time if architects are not warned of it.

WILLIAM DAVIDSON

Arthur J. Davis, F.R.I.B.A., of Mewès and Davis, who was presented with the 1931 London Street Architecture Medal, for his Westminster Bank, Threadneedle Street, E.C., at the R.I.B.A. on Monday last.

Plaster for Concrete Ceiling

SIR,—During the past few years there has been a considerable increase in the number of new materials which have been placed upon the market. Architects have ventured from old habits and have favoured the use of some of these materials as an advance on methods of construction, and to conform with the modern architectural style in design.

There is certainly a hesitancy in some instances to depart from old methods, which is justifiable.

Since the introduction of reinforced concrete floors, plastered ceilings have been carried out either by two- or three-coat work.

After the removal of the shuttering, it has been necessary to hack cement concrete while in a green state, in order to provide a key. The liquid, falling to the bottom of the thickness of concrete, forms a fairly smooth surface, traversed by the lines of boards composing the centering.

Hacking has proved none too reliable, unless strict supervision is attendant upon the work. Many failures are undoubtedly due to the lack of a key for the floating coat. Left too long after the striking of the shuttering, the labour in hacking cement concrete becomes too much of an exertion to the workmen, and too great an expense to the builders, so that at times, except for a number of incisions in the concrete, the key is inadequate.

I have observed new materials advertised, fairly widely used, taking the form of painting a liquid on the shuttering which retards the setting of the concrete immediately against the boarding. Brushed over, the aggregate is exposed sufficiently to form a very good key for the plaster.

I have seen this liquid used and in work under my supervision. I have also used it and had the ceilings plastered with two-coat work—i.e. floated and set.

The point, however, which has struck me is: why use two coats of plaster?

Given a really excellent key, what is there against reducing the weight and expense of two-coat plasterwork to these ceilings, and substituting one coat of lime putty, gauged with cement?

F.R.I.B.A.

The PRINCESS Cinema, Kirkdale, LIVERPOOL

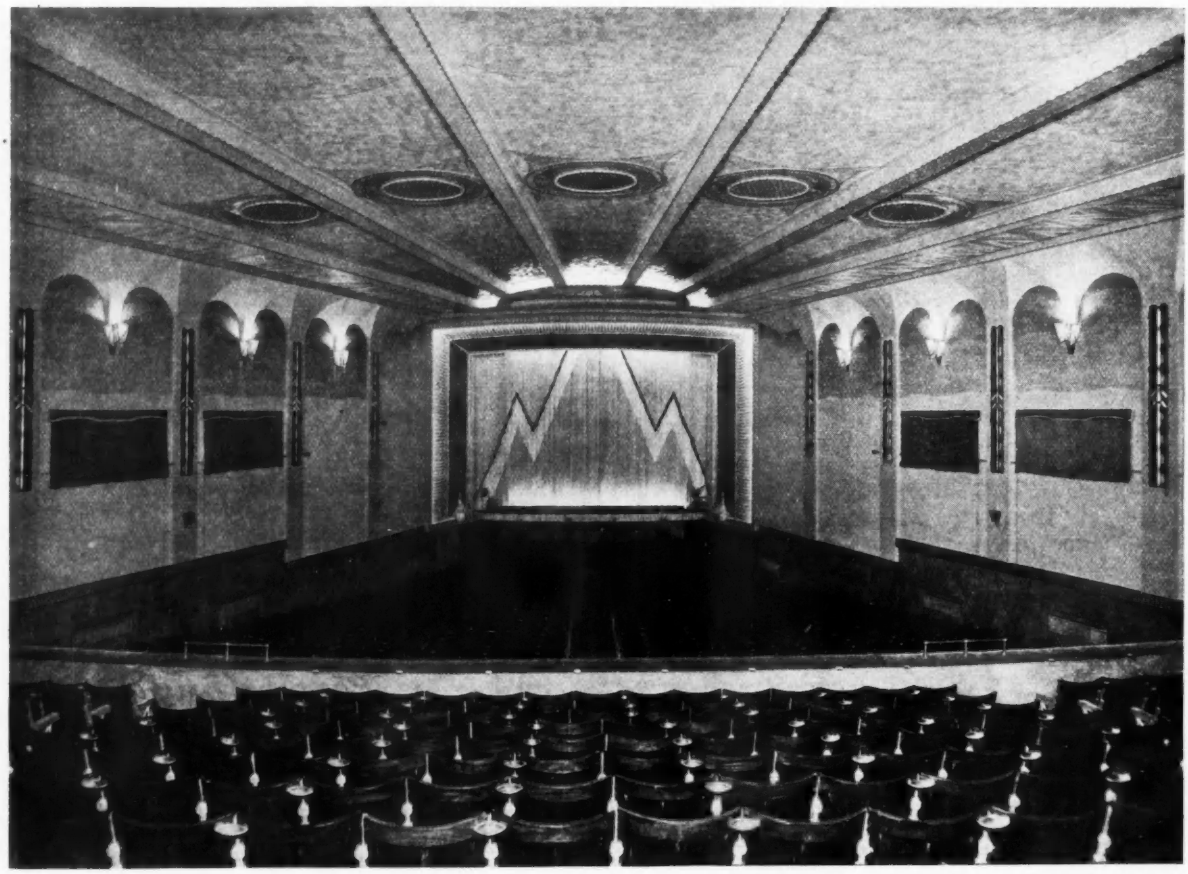
DESIGNED BY G. STANLEY LEWIS

The main entrance, here shown, is at the apex of the roughly triangular site. Rustic bricks and artificial stone are the materials employed. Very ample space has been allocated to poster displays. The house seats 1,500 persons.

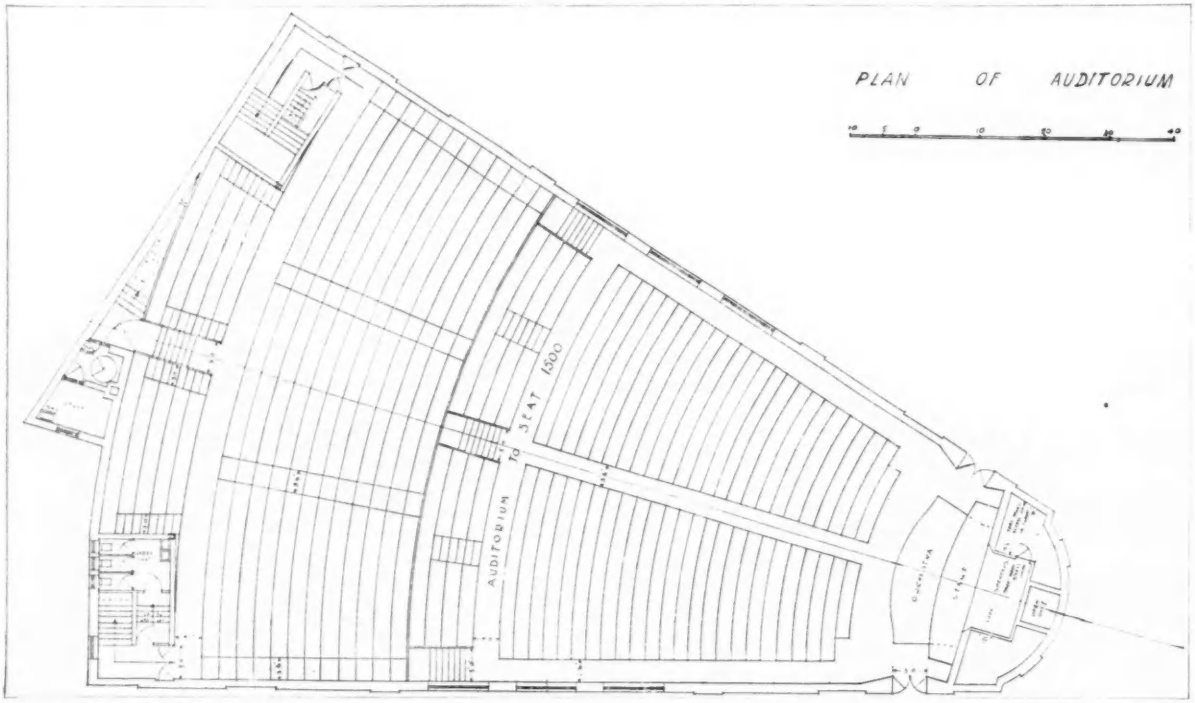
THE Princess Cinema, Kirkdale, is Liverpool's latest theatre, and accommodates 1,500 persons. Situated at the junction of two streets, the building has three main frontages, each of which has been treated architecturally in definite relation to the others. The materials used in the exterior elevations are rustic brick and artificial stone, both turned to decorative account. Large opening windows have been incorporated in the design, and an abundance of sunlight and air will be admitted every morning direct into the theatre. A comprehensive system of mechanical ventilation has also been installed.

The decoration of the auditorium is quite modern, though not of Continental severity. Original lighting effects have been used, with an abundance of colour. The decorations and lighting effects, together with the interior finishing, including the curtains, lighting fittings, waiting halls and floors, have all been carried out to the designs of the architect.

This exterior view is of the side elevation running off to the left from that shown at the head of this page. Entrances with marquises, the line of the cornice, and the central panel, with its large windows capable of admitting light and air direct to the auditorium in the interests of ventilation and sterilisation by natural means, serve as punctuation marks.



The stage and screen, viewed from the balcony. The whole of the decoration, lighting effects—in which a lavish use is made of colour-fitments—curtains and floor coverings, have been carried out to the architect's design.



Princess Cinema, Kirkdale, Liverpool.] [*By G. Stanley Lewis.*

As will be seen from this ground plan, the building has taken the only axis approaching a symmetrical solution of the problem presented by the site. Three frontages result, the most important being that utilized for poster display purposes.

THE NEW R.I.B.A. FORM OF CONTRACT

BY MICHAEL HOARE, B.A., BARRISTER-AT-LAW

The standard form of contract, published by the R.I.B.A. in 1909 and in general use from that date until now, has been withdrawn from circulation, and in its place a new form has been issued. This, though containing some similar or identical provisions, introduces innovations, found desirable by experience, in principle and in expression. The object of this and succeeding articles is to indicate the nature of the more important changes.

IT was pointed out by Mr. Justice Channell as long ago as the year 1901 that building contracts, as a rule, contain provisions whereby a particular person—the surveyor, the architect or the engineer, or whatever (he may be called—is given a double position.

> So far as regards all the direction of the work (he said), and saying what is or what is not to be done and so on, he is the servant and agent of one of the parties; but it has become the practice to make the person who is the servant and agent of one of the parties also perform a totally different duty : he is often authorized to act between the parties as an arbitrator or judge to settle matters between the parties. He has to act in a totally different way according as he is acting in one of those capacities or in the other.
>
> But the position is obviously one which is difficult. Even if the gentleman were a skilled lawyer . . . he would have a difficulty in separating his two duties, and a gentleman who possibly is extremely skilled in his profession is very likely . . . to confuse the two portions of his duties; and, having to obey and follow the direction of one of the two parties in reference to the great proportion of what he has to do throughout the business, he falls into the way of taking a certain amount of instruction from them with reference to either part of his duties.

This passage occurred in the course of the judgment in a case in which the contract provided that the decision of the surveyor with respect to the value of the works executed should be final and without appeal, and the contractor was seeking to recover an amount in excess of the value certified by the surveyor, on the ground that, as the employer, though without any dishonest intention, had interfered with the surveyor in the exercise of his functions as quasi-arbitrator between the parties and influenced him in arriving at his decision as to the value of the work, the final certificate of value in which the surveyor's decision was expressed was not conclusive and binding upon the contractor. It was decided that the contractor was not in the circumstances bound by the certificate, and was entitled to recover the larger amount; for the function of the surveyor as final arbiter upon the question of value was one which he was bound to exercise in a judicial manner, with complete impartiality and uninfluenced by either contracting party; and any failure so to exercise it disqualified him from holding his position as final arbiter and rendered his certificate ineffective.

This practice of investing the expert in charge of the works with a dual capacity has been found in many cases to be very inconvenient, not only from the point of view of the expert himself (who in building contracts strictly so-called is generally the architect), but also from the point of view of the employer and the contractor. The employer loses the assistance of his professional adviser at times when he most needs to be advised as to the extent of his obligations to the contractor, and as to the best method of presenting his side of the case before an arbitrator, while the contractor, who desires to remain on good terms with the architect, so as to obtain approval of his work and materials and payments regularly on account during the course of the whole work of construction, is often obliged as a matter of policy to acquiesce in decisions given by the architect in the exercise of his judicial functions, even though he considers those decisions inequitable.

The 1909 form to some extent mitigated these evils by including an arbitration clause of which the terms of submission were extremely wide, though limited by several important exceptions. The clause provided that the arbitrator should have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to the matters expressly excepted, . . . and to determine all matters in dispute which should be submitted to him . . . in the same manner as if no certificate, opinion, requisition or notice had been given, and as a result, although it was still the duty of the architect to express opinions and to issue certificates of value, the question whether in arriving at his decisions he had brought his mind to bear upon the subject judicially as an impartial arbiter was (save with regard to the excepted matters) purely of academic interest; for if either party was dissatisfied with the architect's decision, he could appeal to the arbitrator. But the excepted matters (those upon which the architect's decision was to be final) were such that contractors on occasion thought it better not to insist upon what they conceived to be their strict rights with regard to some things in order to avoid disputes with the architect, who in regard to the excepted matters might still give decisions adverse to but binding upon the contractor : of those excepted matters, perhaps the most important were those whereby the architect had power to order, during the progress of the works, the removal of any materials which in his opinion were not in accordance with the specification or his instructions and the substitution of proper materials, or to order the contractor to dismiss from the works any person employed thereon who might, in the opinion of the architect, be incompetent or misconduct himself. The arbitrator had no jurisdiction to hear any dispute as to whether the opinion of the architect upon these matters was justified.

The new form of contract contains alternative arbitration clauses, the second of which is a reproduction of the arbitration clause of the 1909 form. Of this, suffice it to say that the wording of the earlier clauses of the form is so changed that it is doubtful whether the matters, which appear at first sight to be excepted matters, are, upon a true interpretation of the contract, excepted at all. However this may be, the first of the alternative arbitration clauses is quite new in form, and empowers the contractor without exception to submit to arbitration all decisions of the architect as to which he is dissatisfied. Moreover, the position of the architect as the professional expert, engaged by the employer and acting as the employer's agent, is still further emphasized by a provision whereby disputes or differences are, in the first instance, to be submitted to the architect, whose decision is to be regarded as that of the employer and binding upon him, leaving to the contractor alone the right to appeal to the arbitrator.

From the foregoing, it is clear that, under the provisions of the new form, the architect will be free to devote himself to the service of the employer as his agent and adviser far more effectively than was possible so long as he had judicial functions to perform as an impartial arbiter between the parties.

In addition to this, however, provision has been made in the new form for the more expeditious execution of variations and extra work than was possible under the 1909 form. Although by that form the architect could order on behalf of the employer any changes which his principal required or he himself thought desirable, there was apt to be delay in the execution of his orders, if, contrary

to the architect's expectation, the contractor gave notice that he considered that the work necessary to comply with his orders would be extra to that comprised in the contract.

Clause 1 of the new form avoids this difficulty by postponing, until after the work has been done, the consideration of the question whether compliance with the architect's orders will involve an extra. It provides in effect—much as before—that the contractor shall carry out and complete the works in accordance with the directions and to the reasonable satisfaction of the architect, who may issue written drawings, details or instructions in regard to a number of matters, including variations, the removal of materials from the site and the re-execution of work already executed. But the contractor is no longer required to give notice before proceeding with the work when he is of opinion that the work necessary to comply with the architect's instructions is extra to that comprised in the contract. By the terms of the new clause the contractor is to comply with the architect's instructions forthwith and without question. If such compliance involves a variation, the contractor's remuneration will be adjusted accordingly. Any dispute as to whether such compliance has involved a variation will, of course, be determined by arbitration.

In consequence of these changes and of others which we shall have occasion to notice in a subsequent article, the employer will enjoy the benefit of the expeditious and efficient execution of the job exactly in accordance with his requirements, even though he changes these a hundred times during the course of the work of construction, while the contractor, though called upon to comply with even the most extravagant orders of the architect, will have the assurance that he will be entitled to demand adequate remuneration for his services.

[*To be continued*]

STREET ARCHITECTURE

MR. HOWARD ROBERTSON, F.R.I.B.A., in his paper on "Street Architecture," read at a meeting of the R.I.B.A. on Monday last, when Mr. Arthur J. Davis, F.R.I.B.A., was presented with the London Street Architecture Medal for 1931, said we had built up in England architectural traditions as fine as any in domestic and ecclesiastical work, and by no means negligible in civic buildings, but in certain fields we had failed to realize that tradition was formed as the result of successful experiment.

Narrowness of outlook and lack of imagination at the time of the Revival killed the Gothic, at the time when its constructive principles might have become a source of inspiration for design appropriate to modern frame construction; and, for one cause and another, we found ourselves today with a style which, for the sake of simplicity we would call Georgian, as our generally accepted national expression.

Sir Edwin Lutyens' Skill

But the Georgian style was never developed on the basis of the structure or the requirements encountered today in modern commercial buildings, and the best efforts to adapt it served only to illustrate its limitations. Sir Edwin Lutyens, for instance, was a master in handling it; he had never designed a single building which was uninteresting. But his skill was the most satisfying in those buildings to which his characteristic type of expression, a free Georgian, was best suited. Even the finest architects who were accustomed to clothe their structures in a certain style of dress, were sooner or later faced with the question of whether the time had not come to change their tailor. And, more especially in commercial buildings, all architects needed to forget their favourite themes and to examine their problems in a fresh and fundamental way.

Structural emancipation from limitations permitted today wide licence. Immense spans, vast areas of glass might be demanded, and called for expression. Requirements tended to become more and more specialized, and it was doubtful whether there was a great future for the uniform screen type of façade treatment which marked certain phases of traditional street architecture.

The Expression of the Individual Purpose

The uniform architecture of certain sections of Bath or the rue de Rivoli and the Place Vendôme in Paris, with its inevitable restrictions on the use of the building behind the architectural screen, was an example of a form rarely feasible today. In building the Place Vendôme anew, it would really be more in accord with modern requirements to provide merely floors and stanchions, settle the roof lines, and leave the façades to be filled in from top to bottom within those guiding lines in much the same way as a ground showroom was left to be subdivided and faced according to the tenant's requirements. At the moment only the ground and mezzanine floors of new buildings were thus left to be completed. The future might, perhaps, witness the subsequent erection of the total façade screen to suit the expression of the individual purpose.

The abandonment of the uniform street treatment of the type exemplified in sections of Regent Street resulted in the loss of certain elements of cohesion and grandeur. Each building in a street tended to become, as was already the general rule, a separate unit. But if there could be control of main lines, an insistence on the importance of a proper junction with contiguous façades, and, above all, a greater community of outlook between architects, the chances of failure would be greatly lessened.

Harmonious Street Architecture

Many Parisian streets composed of individual façades had an ensemble of unity, due to a tradition in the observance of certain principles and to the habitual use of stone as a material for facing. The Parisian façade took cognizance of the support of its neighbour; the centres of buildings were not unduly stressed—thus avoiding a repetition of detached points of emphasis—and a certain community of feeling between the designers of different ages and schools was still evident even in these days of rapid changes.

It would be to the benefit of London street architecture were it possible for the buildings in selected streets to be allocated to architects of similar tendencies. It would be fairly easy to name a dozen architects of the "modern" persuasion who would put together, in a row, a dozen or more individual frontages, each to their own clients' requirements, yet forming a harmonious ensemble; and the same would be true of designs of members selected from the "traditional" group.

Elements of Discord

Trouble arose when the functional modernist worked alongside the man who detested that type of work, and meant to say so with all the emphasis of columns and pediments. Team work was essential to the success of street architecture, and it was because so much new building in Amsterdam, Berlin, and even New York, had been handled by architects with a certain similarity of ideals and training—in most cases with modern tendencies—that the street architecture of those cities had outstripped our own in unity of conception as well as in vitality and interest.

Behind diversity of form and treatment peered the possibility of discord or harmony in the essential approach to design, and the result was either war or peace. Façades vertical, façades horizontal, façades patterned, might all join together in street harmony if their design was imbued with the same spirit. Form was an important factor, but more so still were the foundations of character.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

The Housing Policy : A Statement

AN important statement on housing policy was made by Sir E. Hilton Young, the Minister of Health, in reply to an amendment moved by Mr. Maxton, to exclude from the Expiring Laws Bill that section of the Rent Restrictions Act of 1920 which permitted an increase of 40 per cent. in rents stabilized under the Act of 1915.

Sir E. Hilton Young said that there was information now available to show that our housing policy had failed to provide an adequate supply of the lower class of houses to let for the wage-earners. Owing to current financial conditions, if never before, it was now absolutely imperative that we should get full value, from the point of view of social development, for every penny of public money that we spent on houses, and that reconsideration would be necessary for the whole problem in order to secure the absolute extortion, as it were, of full value for our public expenditure under changed conditions. The Government would consider the problem in the single light of the interest of the whole community, in one of the greatest of all interests, an adequate housing supply, and, as a first aim to secure the housing accommodation that the nation needed and as an incidental to that end, a fair deal to the landlord and a fair deal to the tenant.

As to rent restriction, the Government could not deal with the present system by an abrupt and arbitrary interference of the sort proposed in the amendment. He would, however, give the undertaking that the whole matter would receive the prompt consideration of the Government in view of the changed conditions of the time. He asked the House not to throw the whole of the administration into confusion by the acceptance of the amendment.

The amendment was rejected by 311 votes to 40.

Housing Schemes Suspended

At question time Major Milner asked the Minister of Health if he would state the number of housing schemes which had been suspended or retarded, following the suggestions to local authorities that all expenditure should be reduced to a minimum; and if he could state the number of persons who would have been employed had the various housing schemes been continued.

Sir E. Hilton Young said he had only been informed of nine cases, covering quite a small number of houses, in which any definite action had been taken by the local authority to curtail or suspend their housing programme. The hon. member was under a misapprehension in stating that it had been suggested to local authorities that all expenditure should be reduced to a minimum, irrespective of its character or purpose.

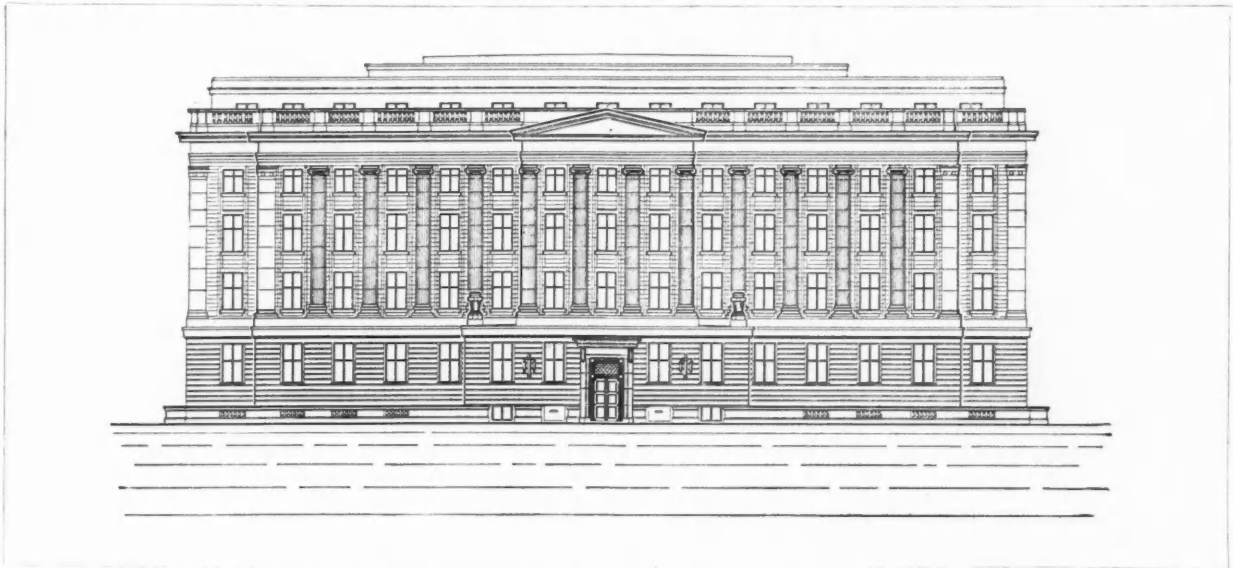
Manchester and the Housing Problem

Sir J. Nall asked what was the present position regarding the housing schemes of the Corporation of Manchester; and whether his department would continue to require the city council to build only the types of houses for which the greatest demand existed.

Sir E. Hilton Young said that the Corporation of Manchester had recently submitted proposals for the building of over 2,000 houses, many of which were of a larger size than he thought was required. The Corporation had been asked to revise their proposals so that the bulk of the houses to be provided could be let at a lower rent than had been usual in the City for Corporation houses, and he was in communication with them on the subject.

Sir J. Nall then asked the Minister whether he was aware of the proposals of the Corporation of Manchester to demolish a large area of property in the district of Hulme without any provision for alternative accommodation in the immediate vicinity; that previous schemes had resulted in only 25 per cent. of the dispossessed population moving to new housing estates, whilst 75 per cent. had remained in overcrowded conditions in the vicinity of the demolition area; and would he review existing legislation on this matter at an early date.

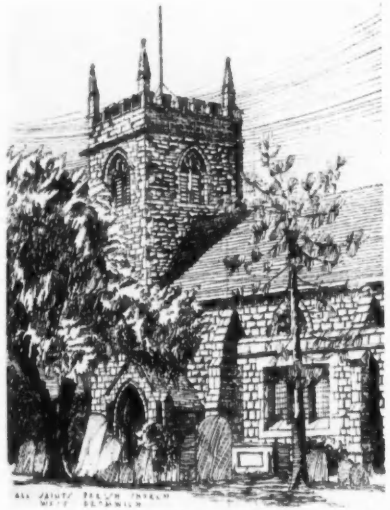
Sir E. Hilton Young said he understood that the question of rehousing accommodation to be provided by the Corporation of Manchester in connection with the proposed clearance referred to was still under consideration by the Corporation. As regarded the only other area which had been cleared by the Corporation since the war, his information was that 75 per cent. of the persons displaced were in fact rehoused by the Corporation. He did not think that any amendment of existing legislation on this matter was required.



The elevation to Euston Road of the Wellcome Research Institution, now in course of erection from the designs of Septimus Warwick. British Empire materials, with the slight exception of some Italian marble, are to be employed throughout the building, the external facing of which will be of Portland stone. The corner stone was laid by the Rt. Hon. Lord Moynihan, K.C.M.G., on November 25.

THE SKETCH CLUB

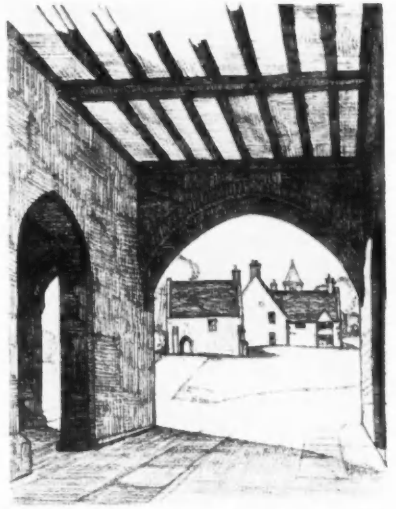
FORTY-SECOND SESSION



By Brian Hackett.] (Pen and Ink : 3¾″ × 5⅜″)
All Saints' Parish Church, West Bromwich.

By Kenneth F. Mason.] (Pencil : 7″ × 5¼″)
Robin Hood Bay, Ness Point.

By Kenneth F. Mason.] (Pencil : 7″ × 5¼″)
St. Hilda's Parish Church, Ellerburn.



By Gilbert Brooks.] (Pencil : 7½″ × 8½″)
In a Village near Salisbury.

By Ronald Knight.] (Pencil : 6¾″ × 9½″)
The Bank of England, Threadneedle Street, E.C.

By Arthur F. Nisbet.] (Pen and Ink : 10¼″ × 4½″)
Otter Bridge, Newton Poppleford, Devon.

By Brian Hackett.] (Pencil : 7″ × 3¼″)
Dudley Castle.

By R. Harley Smith.] (Pencil : 7½″ × 6½″)
The Salutation Inne.

The Bank of England, Threadneedle Street, E.C.

Dudley Castle.

The Salutation Inne.

By S. Brinton.] (Water-colour : 10½″ × 7½″)

A corner of Reighton Village, Yorkshire.

By Anthony Herbert.] (Pencil : 11″ × 14″)

By the River, King's Lynn, Norfolk.

By S. Brinton.] (Water-colour : 12½″ × 8¾″)

Queen Street, Filey, Yorkshire.

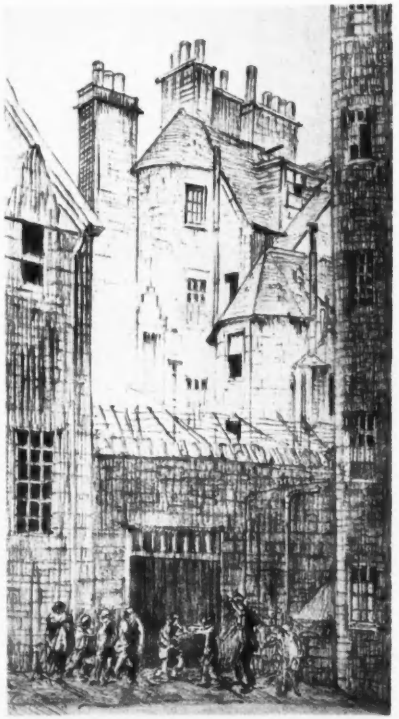
By Eric S. Smith.]
(Pencil : 5¾″ × 11″)

Canterbury Cathedral, from Butchery Lane.

By E. Maxwell Fry.]

Hampton Court, from the Long Lagoon.

FURTHER SKETCHES FROM THE HOLIDAY COMPETITIONS.



(Crayon : 10¾″ × 8¼″)

[*By J. Maxwell Scott.*
(Pencil : 4¼″ × 8″)

In St. John Street, Edinburgh.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Cement-Lime Mortars

AN architect commented on the poor working qualities or "harshness" of 1 : 6 cement mortars, and asked whether a mortar composed of a mixture of 1 : 5 cement mortar and 1 : 3 lime mortar would give better workability, that is, would be more "buttery."

On account of the harsh working properties of very lean mixes, cement mortars extended with lime are in common use in the United States of America and on the Continent. The value of the lime addition, however, depends largely on the degree of workability of the lime used. In the United States of America extremely plastic "finishing" hydrates are, apparently, available commercially, and even a small addition of such limes improves the lean cement mixes quite appreciably. When, as is often the case in Great Britain, a dry hydrated lime is employed for the sake of convenience and simplicity in gauging and mixing, the additional plasticity obtained may be illusory, on account of the relatively low workabilities of some of the dry hydrated limes available at the moment. The use of a plastic "run" putty, well aged, should afford a comparable improvement, in spite of the greater difficulty of obtaining a uniform mix. There is, however, a tendency for operatives to look upon such gauged mortars as ordinary lime mortar or coarse stuff, to be left about indefinitely and knocked up for use again at convenience, regardless of the normal setting time of the Portland cement present, and this must be guarded against.

It is suggested that one part of Portland cement by volume be added to three parts of hydrate or run putty of ordinary stiff consistence, with as much sand as the mixture will carry for the particular job in hand : i.e. a 1 : 3 : 8 or 1 : 3 : 12 mix by volume.

Higher proportions of Portland cement may predispose a rendering to crazing and cracking when in large panels, and in a mason's mortar result in a degree of hardness and impermeability which is often undesirable.

Crazing of Plaster Applied over Heating Panels

A contractor had experienced trouble with ceiling plaster applied over heating panels on the underside of a concrete floor, and requested the opinion of the Station on the possible cause of the occurrence. After one year the surface of the plaster was badly crazed, and it was found that a canvas scrim, embedded in the plaster, had deteriorated. A sample of the plaster was submitted.

On analysis, the plaster undercoat was found to be richer than is usually specified for work over heating panels; it was, however, heavily gauged with plaster of Paris, and this heavy gauging was probably sufficient to prevent excessive shrinkage. The finishing coat was found to be very rich, but was only moderately gauged with plaster.

The scrim was well embedded in the sample, and it appeared that a skimming coat of plaster about $\frac{1}{8}$ in. thick had been applied over it.

Experiments carried out at the Building Research Station have shown that the severe conditions of exposure over heating panels are very liable to cause cracking in ordinary plaster finishes. The function of the scrim, which is normally specified, is presumed to be that of bridging over any cracks which are formed. It is essential, however, that the scrim should act as a surface reinforcement, and all specifications normally adopted for plastering over heating panels lay particular stress on the point that the scrim must be worked into the surface, but under no circumstances should a skimming coat be applied over it. In this case there is little doubt that the failure is due to the fact that a skimming coat of a very rich and lightly-gauged plaster has been applied over the scrim.

The sample of plaster submitted appeared to be very much thicker than is ordinarily recommended for work of this kind. The thickness was of the order of $1\frac{1}{2}$ ins. to $1\frac{3}{4}$ ins., whereas $\frac{3}{4}$ in. to $\frac{7}{8}$ in. thickness is usually specified.

No explanation can be given for the deterioration of the scrim, which appears to be a normal hessian fabric. Similar material which has been used in our experimental panels has not undergone serious deterioration. It can only be suggested that the deterioration is due to some previous treatment of the fabric, before incorporation in the plaster.

SOCIETIES AND INSTITUTIONS

TOWN PLANNING INSTITUTE

MR. R. C. MAXWELL, O.B.E., in his presidential address to the Town Planning Institute, said all bodies and persons interested in town and country planning, whether from the point of view of the preservation of the amenities of the countryside, or the orderly and economic development or re-development of urban areas, recognized that it was a matter of the first importance that the Town and Country Planning Bill should be placed on the Statute Book, and that, too, at an early date. Action by builders and land developers was in progress in all directions, and damage was being done which it would be impossible to repair or make good. At the same time it was fully recognized that much useful work could be done and was being done by many authorities under existing powers; and no expectation of increased powers should be allowed to stop the work now in hand, or damp the energy or enthusiasm of those who were now carrying on planning work.

There existed a somewhat prevalent impression in the public mind, and even in the minds of many local authorities who ought to know better, that a town planning scheme necessarily involved more or less heavy expenditure in connection with the works and improvements which the scheme was intended to direct and control. There could be no greater delusion, or one which was more likely at the present time to interfere with the passing of the Bill. Apart from the initial cost of the preparation of a scheme, no expenditure by the local authorities was necessarily or even ordinarily, involved in a town planning scheme. What a scheme did or should do was to direct and control the lines to be followed by development and building when and as it came along, so as to secure, in connection with such development and building, proper sanitary conditions, amenity and convenience, and to protect existing amenities, whether in urban or in rural areas.

It was fully recognized that the Government now in office had a national task of supreme and overriding importance to perform, and that nothing must be allowed to interfere with the performance of that task.

But probably much of the work involved would be carried on outside the immediate purview of the legislature. This being so, and having regard to the interesting aspect and composition of the Opposition benches in the House of Commons, a considerable amount of Parliamentary time should be available for other business. There seemed no reason, therefore, why the Town and Country Planning Bill should not be

reintroduced at an early date. It behoved them, therefore, as an Institute, and the other organizations interested in town planning, to use all and every means at their command to secure that the Bill should again come before Parliament, and that this time the measure should be passed through all its stages, in both Houses, to a triumphant issue.

LIVERPOOL ARCHITECTURAL SOCIETY

Mr. Leonard Barnish, F.R.I.B.A., opening a discussion on "Functionalism means the overthrow of Tradition," at a meeting of the Liverpool Architectural Society, held on November 18, said: Nothing would ever overthrow tradition. Function had always been the main element in architecture. To talk of functionalism as a new architecture was going too far. It would help, but it was not a cure-all. Functionalism was a stunt of the architectural schools, and the man who imagined he could design without other aid was most strangely conceited.

Mr. H. Hinchcliffe Davies stressed the difference between live and dead tradition. The eighteenth-century architects of Georgian houses were designers in the tradition of their day, the live tradition. The modern designers of half-timber buildings were mere copiers of a dead tradition. Tradition was not static; it moved, and much modern work which many considered untraditional was really in the living tradition.

Professor Lionel Budden, F.R.I.B.A., said modern architecture was in an experimental stage, though it would eventually establish its own convention. The danger was that people would become dogmatic, and praise or blame a building at sight, according to its use or non-use of the orders.

Mr. T. Taliesin Rees, F.R.I.B.A., stated that there was no such thing as modernism in architecture. Tradition persisted as a spiritual thing. The mischief was that very often we copied the bad instead of the good.

Professor Patrick Abercrombie, F.R.I.B.A., saw it as a sign of weakness that the modernist method had already established a very strong tradition—that was, had got into a cliché.

PALLADIO AND INIGO JONES

Sir Banister Fletcher, PP.R.I.B.A., lecturing on the later art of the Italian Renaissance at the Central School of Arts and Crafts, on Wednesday, Nov. 18, dealt with the work of such outstanding architects as Sanmichele, Vignola, and Palladio.

Palladio, he said, too often restricted to the use of mean materials, erected many beautiful buildings in his native city of Vicenza; notably the celebrated Basilica, built around a mediæval structure. It was of special interest to us that Palladio's work was closely studied by our own Inigo Jones on his visits to Italy, and thus Palladio became associated with English Renaissance; for Inigo Jones, inspired by much of the great Italian master's work, introduced his regularized type of design into this country, as seen in the Banqueting House, Whitehall.

A copy of THE ARCHITECTS' JOURNAL for November 4 (the New Materials Number) has been returned to the publisher by the Post Office, on the grounds that the address given is insufficient. The copy was addressed to C. H. Scott, Esq., Messrs. James Hirst & Co., Ltd., Manchester. The sender of this copy is asked to communicate with The Publisher, The Architectural Press, 9 Queen Anne's Gate, S.W.1, in order that it may be returned to him.

COMPETITIONS OPEN

December 8.—Sending-in day. New Orphanage to be erected in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage. Limited to architects who are resident or whose principal offices are within a ten-mile radius of Liverpool Town Hall. Assessor: A. H. Moberly, F.R.I.B.A. Premiums: £200, £100, and £50. Conditions were obtainable from the Secretary, the Liverpool Orphanage, Myrtle Street, Liverpool. (Deposit £1 1s.)

December 31.—Sending-in day. Latest date for conditions: September 31. Proposed New Town Hall and Municipal Buildings, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost to be less than £1,000) for the Incorporated Association of Architects and Surveyors. Premiums: 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

The last day for submission of designs in the Southampton Grammar School Competition has been extended to December 8.

THE ARCHITECTS' DIARY

WEDNESDAY, DECEMBER 2

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of photographs and drawings of Russia's new buildings. Until December 18.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Development of Lighthouses." By D. Alan Stevenson, M.INST.C.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Chateaux on the Loire." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

APPLIED ARTS AND HANDICRAFTS EXHIBITION. At the Royal Horticultural Hall, Westminster, S.W. Until December 4.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "The Principles of Calculation of Low Temperature Radiant Heating." By A. H. Barker, B.A. **7 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, S.W.1. Students' Meeting. "Ventilation, with special reference to Heat Removal on the Tube Railways." By E. A. Turner. **6.30 p.m.**

THURSDAY, DECEMBER 3

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Collecting Cottage Furniture." By Fred Skull. **7.30 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Later Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Submersible Bridges." By R. P. Mears, M.INST.C.E. 6.30 p.m. Yorkshire Branch. At the Hotel Metropole, Leeds. "The Influence of Structural Steelwork on Building Construction. By J. Kershaw. 7 p.m. **6.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, S.W. "The Court House, Meon." By P. Morley Horder. **8.30 p.m.**

FRIDAY, DECEMBER 4

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Later Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, DECEMBER 5

Sunrise, 7.48 a.m. Sunset, 3.52 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Last of five non-technical Lectures on Present-Day Architecture. "Planning the Town." By Dr. Raymond Unwin, F.R.I.B.A. **3 p.m.**

TUESDAY, DECEMBER 8

UNIVERSITY OF LONDON EXTENSION LECTURES. At the Victoria and Albert Museum, South Kensington, S.W. Fifth of six lectures on "French Art." By Miss M. Chamot. **3 p.m.**

WEDNESDAY, DECEMBER 9

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Roads and Road Transport." By Sir Henry Maybury, G.B.E. **8.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Borromini." By Lord Gerald Wellesley, F.R.I.B.A. **6 p.m.**

MANCHESTER SOCIETY OF ARCHITECTS. "The Furnishing of Buildings." By Edward Maufe, F.R.I.B.A. **6.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C. "The Louvre and the Tuileries, Paris." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, DECEMBER 10

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At College of Art, Leeds. "Architectural Lighting." By R. Waldo Maitland, A.R.I.B.A. **7 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Softwoods." By Alexander Howard. **7.30 p.m.**

FRIDAY, DECEMBER 11

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "Some Economies and Advantages that have resulted from Town Planning." By F. Marsden, M.T.P.I. **6 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

FACULTY OF ARCHITECTS AND SURVEYORS. Annual Dinner, to be held at the Hotel Metropole, Northumberland Avenue, W.C.2. 6.45 for 7.15 p.m. **7.15 p.m.**

MONDAY, DECEMBER 14

R.I.B.A., 9 Conduit Street, W.1. "Stained Glass in relation to Architecture." By F. C. Eden, M.A., F.R.I.B.A. **8 p.m.**

TUESDAY, DECEMBER 15

UNIVERSITY OF LONDON EXTENSION LECTURES. At the Victoria and Albert Museum, South Kensington, S.W. Last of six lectures on "French Art." By Miss M. Chamot. **3 p.m.**

WEDNESDAY, DECEMBER 16

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Churches and Later Palaces of France." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

CHARTERED SURVEYORS INSTITUTION. Annual dinner of the quantity surveyor members, to be held at the Hotel Victoria, Northumberland Avenue, W.C.2. **7.30 p.m.**

TRADE NOTES

Messrs. Haywards, Ltd., of Union Street, Borough, S.E.1, have just issued a new catalogue describing their Reform lanterns and skylights, etc., accompanied by numerous diagrammatical drawings and illustrations showing some of the various types of buildings in which Reform roofing has been incorporated. Reform glazing, it is stated, as used in the construction of lanterns, skylights, roofs, shelters, verandas, etc., has specially treated glazing bars. The glass sheets are supported on asbestos wicks, and securely but freely fastened to the glazing bars by means of delta springs and stop clips. Whilst each piece of glass is held with the utmost security, it remains free to expand and contract. It should be noted that ample channels are provided at each side of the bar for carrying away condensation water from the underside of the glass, when this forms owing to the excessive moisture in the atmosphere.

Among the many buildings for which Haywards' roofing has been specified, are the following: Forum Theatre, South Kensington (J. Stanley Beard and Clare, F. & A.R.I.B.A.); Council Offices, Chingford, Essex (Frank Nash, F.R.I.B.A.); Royal Automobile Club, Pall Mall, S.W. (Mewès and Davis, FF.R.I.B.A.); Handsworth Library, Birmingham (H. H. Humphreys); Electric Sub-Station, Newington Green (E. C. P. Monson, F.R.I.B.A.); Dulwich Baths, Goose Green, S.E. (William Bell); Public Library, Edmonton (E. J. Willis); Limehouse Public Library, Norway Place, E.14 (Bernard J. Belcher, F.R.I.B.A.); Filling Station, Fulham, S.W. (Hockley and Chamberlain), and the Kodak Building, Wealdstone, Middlesex.

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In the full-page advertisement of Messrs. Homan and Rodgers, on page xlvii of the JOURNAL for November 18, there occurred a misprint by which this well-known firm of specialists in self-centering fire-proof floors were made to appear as makers of self-centering doors. They naturally do not wish the regrettable mischance to lead any of their old friends to the conclusion that they have deserted fire-proof floors. They are, and have been for over sixty years, laying various types of fire-proof floors, and it was their system of flat ceilings which became the forerunner of every type of suspended floors now in wide use.

*

A brochure has recently been issued by Messrs. Holophane, Ltd., comprising illustrations of some of the principal buildings, both in London and the provinces, floodlighted by them on the occasion of the International Illumination Congress, held in September last. Copies of the brochure are obtainable, free of charge, on application to Messrs. Holophane, Ltd., at Elverton Street, Westminster, S.W.1.

*

Messrs. W. T. Henley's Telegraph Works Co., Ltd., have opened new branch stores at Nottingham and Burnley. The Burnley store was opened on November 2, at Victoria Mill, Trafalgar Street, under the management of Mr. R. H. West; telephone number: Burnley 3682. The Nottingham store was opened on November 9, at Park House, Friar Lane, under the management of Mr. J. W. Bayliss; telephone number: Nottingham 4470.

*

In the New Materials issue of THE ARCHITECTS' JOURNAL (November 4 last), Mr. Raymond McGrath, in his article, "Modern Synthetic Facing Materials," referred to cellulose wall sheets used at the Paris Exposition de la Société des Artistes Décorateurs in 1930. It is interesting to note that Mouldings Development, Ltd., of 34 Victoria Street, S.W.1, are the representatives in this country for the supply of Trollit cellulose wall sheets.

*

Messrs. Fredk. Braby & Co., Ltd., recently secured the sole rights of a new invention in metal-covered plywood, which they have marketed under the trade name of Eclipse. The firm have just equipped a special factory with the necessary machinery at their Eclipse Steel Works, Glasgow, for the manufacture of this product. This new material consists of thin sheets of plywood, to which galvanized sheet steel or other sheet metal is cemented by hydraulic pressure on one or both sides. The cementing composition is of such a nature that, it is claimed, neither moisture, heat, water nor force can separate the metal from the plywood, and results in the finished panel being dead flat and smooth. On account of its great strength, rigidity, light weight and freedom from warping, it is also claimed to be specially suitable for the body work and dash boards of motor vans, coaches and cars; ships' cabins, doors and refrigerator holds; partitions, doors, fancy panelling, steel furniture equipment, and shopfronts. It will also be available for roofing purposes, either flat or corrugated. In addition to galvanized steel sheet covering, the plywood can also be supplied covered with stainless steel, bronze, copper, zinc or aluminium.

OBITUARY

G. S. PACKER: 1857–1931

We regret to record the death, at the age of seventy-four, of Mr. Goodwin Simpson Packer, F.R.I.B.A., of Southport. He was articled to Messrs. Garside and Johnson, architects, and afterwards with Messrs. Maxwell and Tuke, and also had several years' experience in the Borough Engineer's Office at Bury. Something like forty years ago he commenced to practise on his own account as architect in Southport, and during his long career has designed many buildings both in and out of Southport. He secured first place among thirty competitors for a church and vicarage at Barnsley, and also submitted a design for the Liverpool Cathedral.

In 1919 he was joined in partnership by Mr. Alfred Crampton.

He was elected to the Fellowship of the R.I.B.A. in 1928.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

North End House, North End Road, Kensington, W. (pages 731–734). General contractors, Higgs and Hill, Ltd. Sub-contractors: Ragusa Asphalte Paving Co., Ltd., asphalt; Geo. Tucker, bricks; Shaws Glazed Brick Co., Ltd., faience work to shopfronts; Kleine Co., Ltd., floors and roofs; Carter & Co. (London), Ltd., tiles; Rheocrete Pumice Stone Slab Co., Ltd., partitions; Richard Crittall & Co., Ltd., central heating; Bratt Colbran & Co., grates; Gas Light and Coke Co., Ltd., gasfitting; F. H. Wheeler, electric wiring; J. Bolding and Sons, Ltd., sanitary fittings; W. N. Froy and Sons, Ltd., sanitary fittings; Frigidaire, Ltd., refrigerators; Crittall Manufacturing Co., Ltd., casements; Blunt and Wray, metal entrance doors; F. A. Norris & Co., Ltd., iron staircases; Morris-Singer & Co., canopies to front entrance; Plastering, Ltd., plaster and decorative plaster; Rippers, Ltd., joinery; W. H. Gaze and Sons, Ltd., shrubs and trees; Express Lift Co., Ltd., lifts.

Mount School, York (pages 739–741). General contractors, W. Birch and Sons, Ltd. Sub-contractors: Shouksmiths and Sons, Ltd., heating equipment; Ames and Finnis, Ltd., roof tiling; George Wragge, Ltd., steel casements; Girdlestone & Co., lighting and stage lighting and fittings; May Acoustics Co., Ltd., acoustic ceiling panels in Cabot's Quilt; Albert J. Shingleton, stage fittings and scenery.

Princess Cinema, Kirkdale, Liverpool (pages 743–744.) General contractor, Walter Spencer. Sub-contractors: Penmaenmawr and Trinidad Lake Asphalte Co., Ltd., asphalt; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, reinforced concrete fabric; McIntyre and Sons, Ltd., structural steel; L. Keizer & Co., Ltd., glass; Frank White, Ltd., canopies; A. and O. Stefanutti & Co., Ltd., terrazzo flooring; Young, Austen and Young, ventilation and central heating; McGoff and Vickers, electric wiring; Harcourts, Ltd., electric light fixtures; Holophane, Ltd., electric head and foot lights; Rowe Bros. & Co., Ltd., sanitary fittings; Quiggin Bros., Ltd., door furniture and metalwork; Crittall Manufacturing Co., Ltd., casement work; J. and J. Hall, fireproof doors and iron staircases; J. Alberti, Ltd., decorative plaster; John Stubbs and Sons, marble; Harold D. Godden, curtains; Walturdaw Cinema Supply Co., Ltd., projector machines; Arthur Roberts, window gearing; C. R. Harrisson and Sons, seating and carpets; Western Electric, Ltd., sound equipment.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. H. S. Davis is to enlarge the White Line Laundry, BLACKHEATH HILL.

Plans passed by the COULSDON U.D.C.: Two houses, Bradmore Way, for Mr. H. C. Doddrell: house, Coulsdon Road, for Messrs. R. D. Taylor, Ltd.: alterations and additions, Swiss tea rooms, Brighton Road, for Mr. A. S. Filce: school, Chipstead Valley Road, for Messrs. Jarvis and Richards; four houses, Vincent Road for Mr. W. C. E. Ingram: house, Windermere Road, for Mr. G. Jensen: two bungalows, Waddington Avenue, for Mr. T. C. Sales: ten houses, Woodlands Grove, for Mr. P. Richardson: five bungalows, Keston Avenue, for Mr. H. S. King: estate development, Chaldon Way, for Mr. C. H. Cearn: nineteen garages, Woodman Road, for Messrs. Bayley Bros.

The Pearks' Dairies, Ltd., are to reconstruct their premises in Cherry Orchard Road, CROYDON.

The CROYDON Corporation has obtained sanction to borrow £40,800 for extensions at the mental hospital.

The CROYDON Corporation is to prepared revised layout for the development of the second section of the Waddon housing estate.

The CROYDON Corporation, at the request of the Ministry of Health, has prepared a revised scheme for rehousing on the Old Town area to provide for houses that can be let at cheaper rents. The new scheme provides for the erection of 110 houses and flats, at a cost of £51,000.

Plans passed by the CROYDON Corporation: Three houses, Downsview Road, for Messrs. J. T. Keen and Sons: six houses, Wickham Road, for Mr. H. Miller: eleven houses, Whitgift Avenue, for Mr. J. G. Cooper: forty-five houses, West Way, for Mr. R. T. Grove: two shops, next 849 London Road, for Mr. H. Elliott; twenty-five garages, Woodside Avenue, for Messrs. Randall, Slade & Co., Ltd.: twenty-four houses, The Ridgeway, for Mr. H. Macintosh: three houses, The Glade, for Mr. F. S. Pym: shop, 1463–5 London Road, for Messrs. Chart, Son and Reading: store and warehouse, 19 Stafford Road, for Mr. H. A. Heath: warehouse and store, Church Path, for Surrey Wholesale Electrical Co.: showrooms, London Road and Bensham Lane, for Messrs. Batchelor (Kennards), Ltd.: six houses, Grange Road, for Mr. P. Richardson: motor showrooms, 379 Brighton Road, for Messrs. Mariners, Ltd.: motor showrooms, 781 London Road, for Mr. C. W. Sawyer: fifty-nine houses, Grange Road, for Messrs. Smith & Co.

Mr. R. Sowery is to erect two blocks of flats at Park Hill and King's Road, EALING.

The FINSBURY B.C. is to erect a block of eleven tenements in Baker Street.

Plans passed by the HAMMERSMITH B.C.: Three shops, Goldhawk Road, for Mr. D. Lewis: four blocks of flats, Cathnor Road, for Mr. F. Witt; cottage, Askew Buildings, for Messrs. B. Colley and Sons, Ltd.

Two blocks of about fifty flats are to be erected on the Brookfield House site, HIGHGATE.

Plans passed by the POPLAR B.C.: Additions, Seamen's Rest, Jeremiah Street, for Messrs. Gunton and Gunton: factory, Gunmakers Lane, for Factory Buildings and General Structures, Ltd.: additions, 305 St. Leonards Road, for Messrs. Simms, Ltd.: laboratory, Three Mill Lane, for Mr. R. C. Fry: additions, "White Hart" public-house, Alfred Street, for Messrs. Mayell and Cole.

Plans passed at PURLEY: House, Smitham Bottom Lane, for Mr. F. Sutton Smith: cinema, Brighton Road, for Mr. A. R. A. Blay: house, Northwood Avenue, for Mr. T. A. Parker: house, Downlands Road, for Mr. P. Richardson: house, Brancaster Lane, for Messrs. H. H. Williams and Partners: house, Purley Bury Close, for Messrs. W. J. Frewing and Son.

Messrs. Thomas and Son are to develop the Purley Downs estate, SANDERSTEAD.

Plans passed at SANDERSTEAD: House, Purley Downs Road, for Mr. H. P. Hawkes: bungalow, Farleigh Road, for Mr. S. H. Palmer: house, Purley Downs Road, for Mr. J. R. Webster: bungalow, Kingswood Way, for Mr. H. F. Dodd: two houses, Purley Downs Road, for Mr. J. P. Warren: four houses, Lime Meadow Avenue, for Messrs. Hooker and Rogers.

SOUTHERN COUNTIES

The Hampshire Education Committee is to erect a junior school at BASINGSTOKE.

Mr. T. S. Lander is to develop the Wick House estate, BOURNEMOUTH.

Messrs. MacKenzie and Phillips have lodged plans with the BOURNEMOUTH Corporation, for the erection of motor showrooms and offices in Christchurch Road.

Mr. E. de Wilde Holding has prepared a development plan for the erection of shops at the junction of Christchurch Road and Hambledon Road, BOURNEMOUTH.

Messrs. Jackson and Greenen are in communication with the BOURNEMOUTH Corporation regarding their scheme for the erection of swimming baths, shops, etc., on the St. Peter's vicarage site.

The Hampshire Education Committee is to erect a senior school at CROOKHAM.

The East Sussex C.C. proposes to proceed with extensions at DARVELL HALL sanatorium, at a cost of £34,000.

The Hampshire Education Committee has purchased a site at HEDGE END, for the erection of an elementary school.

Plans passed by the HERNE BAY U.D.C.: Three bungalows, Pier Avenue, for Messrs. Goodwin and Russell: bungalow, Oakdale Road, and shop alterations, Sea Street, for Messrs. Woolf Bros.: shop, Cobblers Bridge Road, for Mr. J. Wilson: alterations and additions, St. Thomas Cottages, Charles Street, for Mr. R. Messenger: two houses, Western Avenue, for Ashford Builders Co., Ltd.

The Hampshire Education Committee has obtained a site at LYMINGTON, for the erection of a junior school.

EASTERN COUNTIES

Plans passed by the CHELMSFORD Corporation: House, Longstomps Avenue, for Mr. R. H. Currie: alterations, 39 High Street, for Prices Tailors, Ltd.: two houses, Galleywood Road, for Messrs. W. and A. Pudney: house, Moulsham Street, for Mr. T. Letheren: alterations, "Star and Garter" public-house, Moulsham Street, for Messrs. Truman, Hanbury and Buxton, Ltd.: additions, "Three Cups" public-house, Springfield Road, for Messrs. Ind, Coope & Co.: alterations, 6 Duke Street, for Mr. S. T. Ballard.

MIDLAND COUNTIES

Plans passed by the BEDFORD Corporation: Two houses, Elstow Road, for Messrs. E. H. C. Inskip and Son: alterations, 62 St. Loyes Street, for Mr. G. P. Allen: two bungalows, Elstow Road, for Mr. F. Dickens: laundry at convent, Bromham Road, for Mr. T. A. Gray: house, Honeywell Road, for Messrs. J. Corby and Sons: alterations and additions, Girls' Training Home, Park Road, for Messrs. Stonebridge and Harris: house, Elstow Road, for Mr. J. B. Sanderson: dairy, Honey Hill Road, for Mr. A. S. Taylor.

The Derbyshire Education Committee is to erect an elementary school at CHADDESDEN.

The Staffordshire Education Committee is to erect a senior school at COSELEY, at a cost of £37,000.

Mr. A. Rawlins is to develop land in Stone Road, HANFORD, Staffs.

The LEICESTER Education Committee is to erect an infants' school in Imperial Avenue, at a cost of £13,240: and a temporary school in Balfour Street, at a cost of £3,540.

The LEICESTER Watch Committee is purchasing land between Garden Street and Abbey Street, for the provision of a bus station.

The STOKE-ON-TRENT Corporation is seeking sanction for a loan of £23,275, for the erection of sixty-two houses on the Meir estate.

Plans passed at STOKE-ON-TRENT: Four houses, Chell Green Avenue, for Mr. C. Kearton: four houses, Leek Road, Norton-in-the-Moors, for Mr. T. Talbot: two bungalows, High Street, Newfields, for Mr. H. Brereton: shop additions, Blurton Road, Blurton, for Mrs. Critchlow: two houses, Ford Street, Basford, for Mr. J. M. Dimbleby: twenty-two houses, Holden Farm estate, Sneyd Green, for Messrs. Shenton Bros.: two houses, Creasley Lane, Bucknall, for Mr. W. Wightington: shop, Sandon Road, Meir, for Mr. Hulme:, two houses, Greenbank Road, Tunstall, for Mr. J. H. Webb: two houses, St. Chad's Street, Tunstall, for Messrs. Shaw, Taylor and Bromley: additions to shop premises, Brickhouse Street, Burslem, for Mr. A. Boult: alterations to shop, Moston Street, Hanley, for the Burslem and District Co-operative Society, Ltd.: two houses, Leek Road, Abbey Hulton, for Messrs. Ball and Robinson: surgery block, Princes Road, Hartshill, for the N.S. Royal Infirmary: two houses, Gladstone Street, Basford, for Mr. E. Harris: two houses, Branch Lane, Hanford, for Mr. F. Gibson: additions to dairy, Adelaide Street, Fenton, for Mr. T. W. Greer: shop, Heron Street, for Messrs. Swettenhams, Ltd.: alterations, High Street, for Messrs. J. Beresford and Sons, Ltd.: six houses, Park Road, Hanley, for Mr. J. Roberts.

NORTHERN COUNTIES

Mr. C. F. Murphy has prepared plans for the reconstruction of the Church of England schools at BEDLINGTON, Northumberland.

The BEDLINGTON (NORTHUMBERLAND) U.D.C. is to erect another fifty houses.

The East Riding county architect has prepared plans for extensions at the county offices, BEVERLEY.

The BRIERLEY HILL U.D.C. is to erect 100 houses on the Hawbush estate.

The HALIFAX Corporation Transport Committee is to erect a bus depot at Elmwood.

The LEEDS Corporation is to erect further houses on the Soughfield estate, Burley.

The LEEDS Watch Committee has approved plans submitted by Pathé Frères, Ltd., for the construction of repair and dispatch rooms in connection with film stores in course of erection at Mill Hill.

SCOTLAND

Plans passed by the GLASGOW Corporation: Store, Clarence Drive, for Mr. Thomas Donaldson; pavilion, Talbot Terrace, for Woodside Secondary School Committee: buildings, Wilson, Glassford and Hutcheson Streets, for Messrs. David Black & Co.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to October 31, 1931: 1919 Act, 25,129: 1919 Act (by public utility societies), 421: private subsidy schemes (1919 Additional Powers Act), 2,324: slum clearance schemes, 14,001: under construction, 1,442: 1923 Act, by local authorities, 4,033: 1923 Act, by private enterprise, 20,454: under construction, 2,260: 1923 Act, by public utility societies, 80: 1924 Act, by local authorities, 53,104: under construction, 6,412: 1924 Act, by private enterprise, 3,135: under construction, 573: 1924 Act, by public utility societies, 127: under construction, 16: 1930 Act, by local authorities, 126: under construction, 3,180: unallocated houses (under construction), 70: demonstration houses, 17: steel houses erected on behalf of Government by Scottish National Housing Co., 2,552. Total completed, 125,503. Total under construction, 13,953. Total, 139,456.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_2	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0½
A_3	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_3	Colchester ..	E. Counties	1 5½	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_3	Colwyn Bay	N.W. Counties	1 5½	1 0½
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_3	Conway ..	N.W. Counties	1 5½	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_3	Cumberland	N.W. Counties	1 5½	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_3	Denbigh ..	N.W. Counties	1 5½	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_3	Driffield ..	Yorkshire	1 5½	1 0½
A_2	Droitwich	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_3	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0½
A_3	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone ..	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A*	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_3	Gosport ..	S. Counties	1 5	1 0½
A_3	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_3	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_3	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_3	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_3	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_3	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_3	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_3	Southampton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1½
A_3	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 3
¾" Crushed Ballast . . . . ,,	9 6
Building Sand . . . . . ,,	10 0
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¼ Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . . ,,	4 18 6
,, 2nd ,, ... ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . . ,,	30 0 0
Double Headers . . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . . ,,	2 0
3" ,, ,, ,, . . . ,,	2 3
4" ,, ,, ,, . . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R at Nine Elms :	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . . ,,	15 6 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . . as 1" F.S.	9
Deal, Joiner's . . . . ,, ,,	5
,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured ,, . . . ,, ,,	1 3
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . . ,, ,,	1 1
Deal floorings, ⅜" . . . . Sq.	1 1 0
,, ½" . . . . ,,	1 3 6
,, 1" . . . . ,,	1 5 6
,, 1¼" . . . . ,,	1 11 0
,, 1½" . . . . ,,	1 15 0
Deal matchings, ⅜" . . . ,,	16 0
,, ½" . . . . ,,	17 6
Rough boarding, ⅝" . . . ,,	1 6 0
,, 1" . . . . ,,	18 0
,, 1¼" . . . . ,,	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness .	⅜"	½"	⅝"	¾"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch . .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder . .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58½	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . . 57½	Galvanized gas . 47½
Water . . . 52½	,, water . 42½
Steam . . . 47½	,, steam . 37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 0
,, ,, ⅞" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	3" s. d.	4" s. d.
	. F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets. ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal	s. d.
. F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . . lb.	6
Laths, sawn . . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 ft. . ,,	7½ to	1 0
,, ,, 2 . . ,,	10 ,,	1 3½
,, ,, 3 . . ,,	1 4½ ,,	1 10
,, ,, 4 . . ,,	1 11 ,,	2 4
,, ,, 6 . . ,,	2 3 ,,	2 7½
,, ,, 8 . . ,,	2 5 ,,	3 0½
,, ,, 12 . . ,,	2 10 ,,	3 3½
,, ,, 20 . . ,,	3 3½ ,,	3 9
,, ,, 45 . . ,,	3 6½ ,,	4 0½
,, ,, 65 . . ,,	3 11½ ,,	4 4
,, ,, 90 . . ,,	4 4 ,,	4 9
,, ,, 100 . . ,,	4 6 ,,	4 12
Vita glass, sheet, n/e 1 . . ,,		1 6
,, ,, ,, 2 . . ,,		1 3
,, ,, ,, over 2 . . ,,		1 9
,, ,, plate, n/e 1 ft. . ,,		1 6
,, ,, ,, 2 . . ,,		3 0
,, ,, ,, 5 . . ,,		4 0
,, ,, ,, 7 . . ,,		5 0
,, ,, ,, 15 . . ,,		6 0
,, ,, ,, over 15 . . ,,		7 6
Putty, linseed oil . . . lb		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	2 4
Boiled oil . . . . ,,	2 8
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar	Per Rod 32 0 0
,, ,, in cement	,, 34 0 0
,, Stocks in cement	,, 41 10 0
,, Blues in cement	,, 62 0 0
Extra only for circular on plan	,, 3 0 0
,, backing to masonry	,, 2 0 0
,, raising on old walls	,, 3 0 0
,, underpinning	,, 10 0 0
Fair Face and pointing internally	F.S. 3
Extra only for picked stock facings	,, 1 0
,, red brick facings	,, 1 6
,, blue brick facings	,, 1 9
,, glazed brick facings	,, 4 6
Tuck pointing	,, 10
Weather pointing	,, 4
Slate dampcourse	,, 1 0
Vertical dampcourse	,, 1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse	Y.S. 5 6
½″ Vertical dampcourse	,, 7 6
½″ paving or flat	,, 5 6
1″ paving or flat	,, 6 6
1″ × 6″ skirting	F.R. 1 0
Angle fillet	,, 2
Rounded angle	,, 2
Cesspools	Each 5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C. 1 1 6
Bath stone and do., all as last	,, 15 6
Artificial stone and do.	,, 16 6
York stone templates, fixed complete	,, 14 0
,, thresholds	,, 16 0
,, sills	,, 1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr. 4 5 0
Do., 18″ × 9″	,, 4 2 0
Do., 24″ × 12″	,, 4 12 0
Westmorland slating, laid with diminished courses	,, 6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,, 4 0 0
Do., all as last, but of machine-made tiles	,, 3 11 0
Fixing only, lead soakers	Doz. 9
Stripping old slating and clearing away	Sqr. 10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr. 2 12 0
Shuttering to sides and soffits of beams	F.S. 1 0
,, to stanchions	,, 1 0
,, to staircases	,, 2 0
Fir and fixing in wall plates, lintols, etc.	F.C. 5 0
Fir framed in floors	,, 6 9
,, ,, roofs	,, 8 3
,, ,, trusses	,, 9 0
,, ,, partitions	,, 12 0
¼″ deal sawn boarding and fixing to joists	Sqr. 1 17 6
1″ ,, ,, ,, ,,	,, 2 1 6
1½″ ,, ,, ,, ,,	,, 2 7 6
3″ × 2″ fir battening for Countess slating	,, 12 6
Do. for 4″ gauge tiling	,, 16 0
Stout feather-edged tilting fillet	F.R. 6
Patent roofing felt, 1 ply	Y.S. 2 6
,, ,, ,, 2 ,,	,, 3 0
,, ,, ,, 3 ,,	,, 3 6
Stout herringbone strutting to 9″ joists	F.R. 1 0
1″ deal gutter boards and bearers	F.S. 1 4
1½″ ,, ,, ,, ,,	,, 1 8
2″ deal wrought rounded roll	F.R. 9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr. 2 15 0
1¼″ do.	,, 3 4 0
1½″ do.	,, 3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S 1 10
1½″ do.	,, 2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1½″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt. 17 0
Riveted plate or compound girders, and hoisting and fixing in position	,, 1 3 0
Do. stanchions with riveted caps and bases and do.	,, 1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,, 1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S. 1 0
Wrot-iron caulked and cambered chimney bars	Per cwt. 1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters	Per cwt. 1 18 0
Do. in flashings	,, 2 0 6
Do. in covering to turrets, etc.	,, 2 7 6
Do. in soakers	,, 1 13 6
Labour to welted edge	F.R. 3½
Open copper nailing	,, 3½
Close ,,	,, 4½

Lead service pipe and fixing with pipe hooks	½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
	F.R. 1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	—	—	—	—	—	5 9
Extra, only to bends	Each —	—	—	—	2 3	6 6
Do. to stop ends	,, 7	9	1 0	1 3	2 0	—
Boiler screws and unions	,, 3 6	4 0	5 6	8 0	—	—
Lead traps	,, —	—	—	7 6	10 6	—
Screw down bib valves	,, 7 6	10 6	12 6	—	—	—
Do. stop cocks	,, 10 0	12 0	16 0	23 6	56 6	—

		s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh	Y.S. 3 9
Do. in n/w to beams, stanchions, etc.	,, 5 6
Lathing with sawn laths to ceilings	,, 1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,, 2 6
Do. vertical	,, 2 9
Rough render on walls	,, 2 3
Render, float and set in lime and hair	,, 3 0
Render and set in Sirapite	,, 3 3
Render, backing in cement and sand, and set in Keene's cement	,, 4 6
Extra, only if on lathing	,, 9
Keene's cement, angle and arris	F.R. 8
Arris	,, 3
Rounded angle, small	,, 3
Plain cornices in plaster, including dubbing out, per 1″ girth	,, 2
1″ granolithic pavings	Y.S. 5 0
1½″ ,, ,,	,, 6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,, 1 2 6
9″ × 3″ ,, ,, ,,	,, 1 7 0
Extra, only for small quadrant angle	F.R. 9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	,, 1 0
Arctic glass and glazing with putty	,, 1 2
Cathedral glass and do.	,, 1 3
Glazing only, British polished plate	,, 8
Extra, only if in beads	,, 2
Washleather	F.R. 4

PAINTER

	s. d.
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	,, 1 0
Do. with washable distemper	,, 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,, 3 3
Do. on woodwork	,, 3 6
Do. on steelwork	,, 3 0
Do. and brush grain and twice varnish	,, 5 6
Stain and twice varnish woodwork	,, 1 11
Stain and wax-polish woodwork	,, 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 0
Hanging ordinary paper	from 2 9

CLOCK TOWER: HAMPSTEAD INSTITUTE

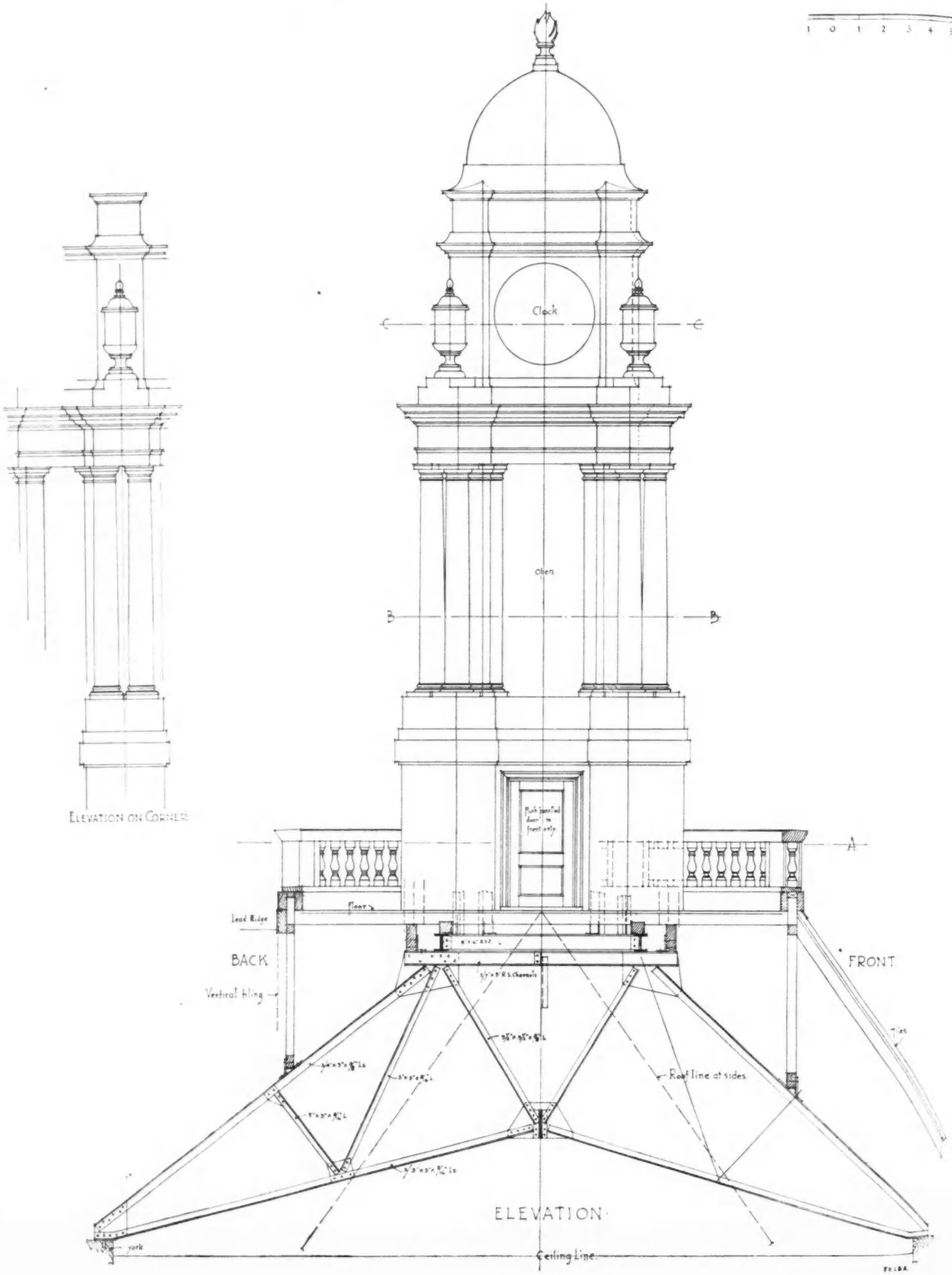
DESIGNED BY CHARLES HANSCOMB, IN ASSOCIATION WITH SIR EDWIN LUTYENS

CREWE HALL, FROM THE GARDEN, SHOWING THE CLOCK TOWER

WITHIN are reproduced the architects' drawings of the clock tower which, as shown in the above illustration, surmounts the Hampstead Garden Suburb Institute, known as Crewe Hall, after Lord Crewe, first president of the governing council. Both the design and the method of construction are clearly indicated in the series of sections illustrated.

The Institute buildings are carried out mainly in brick, stone and tiles, and their inception and erection in sections, the first of which was begun over twenty years ago, was described in an illustrated article in the issue for July 23, 1930.

THE INSTITUT
HAMPSTEAD GARDEN



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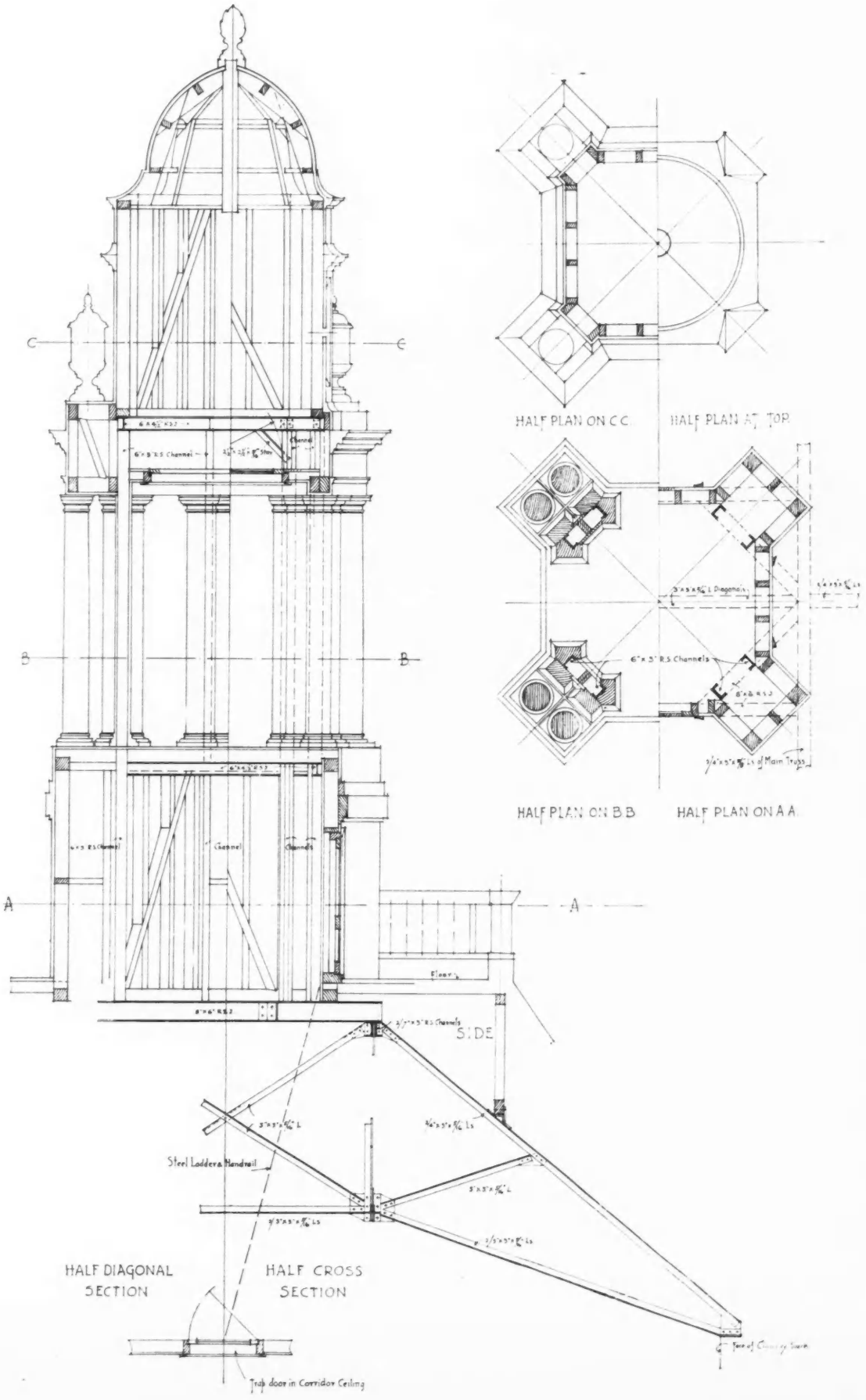


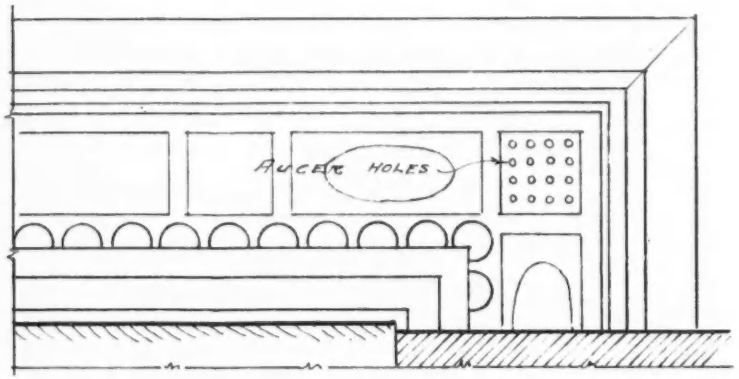
FROM THE NEW WORLD: 8

MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS

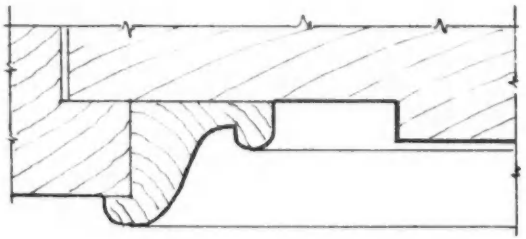
DOORWAY IN BOSTON, MASS.

THE excellent design and proportion of this simple doorway in Chestnut Street, Boston, cannot fail to arrest attention, even at first glance. A closer study reveals its refinement of detail. An uncommon feature is the use of the double book-pilasters without capitals, and with but a slight projection to form a base. This treatment, by divorcing these inner pilasters entirely from the free-standing columns, affords a happy solution of the difficulty encountered when, as in this instance, the front order springs from a lower level.

The details were measured and drawn by R. Keith Harris.



SOFFIT PLAN



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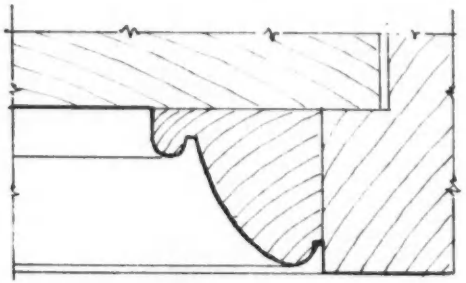

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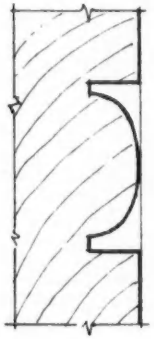
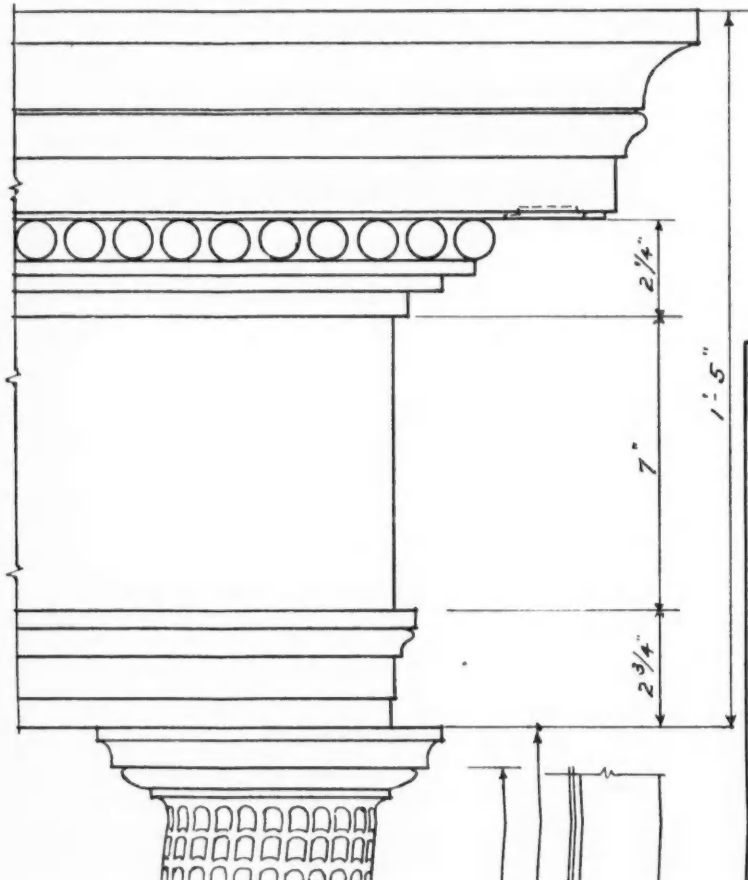
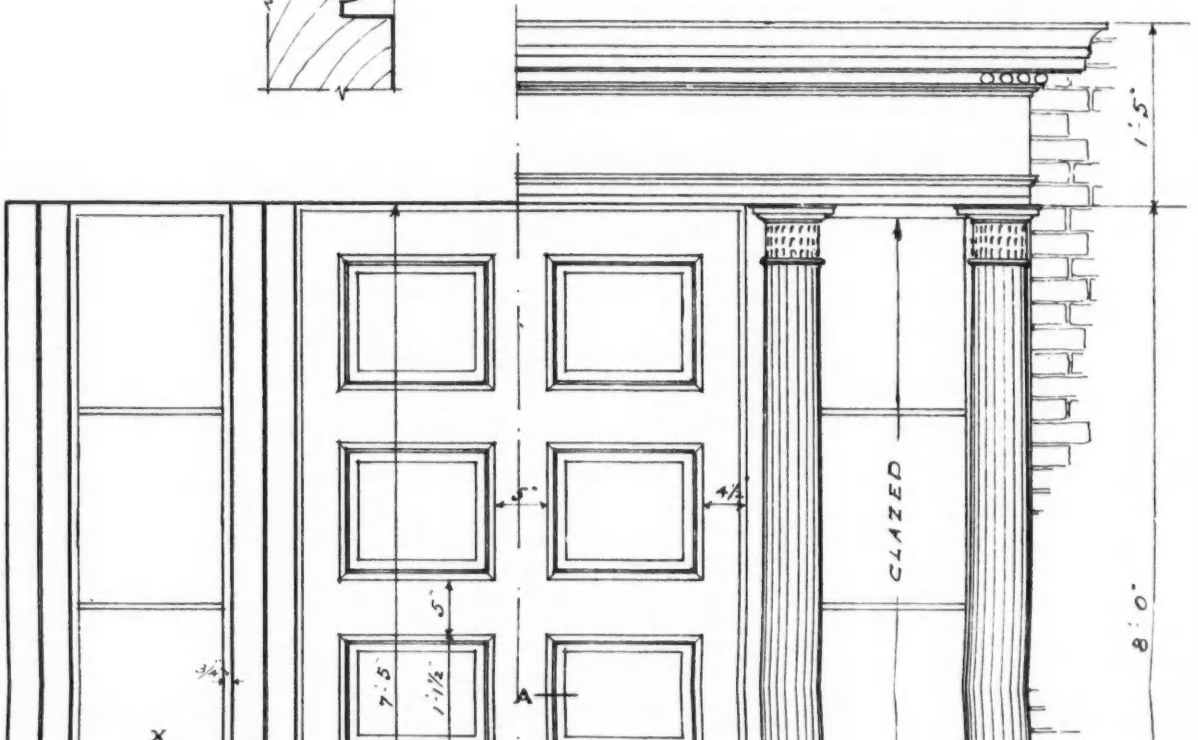
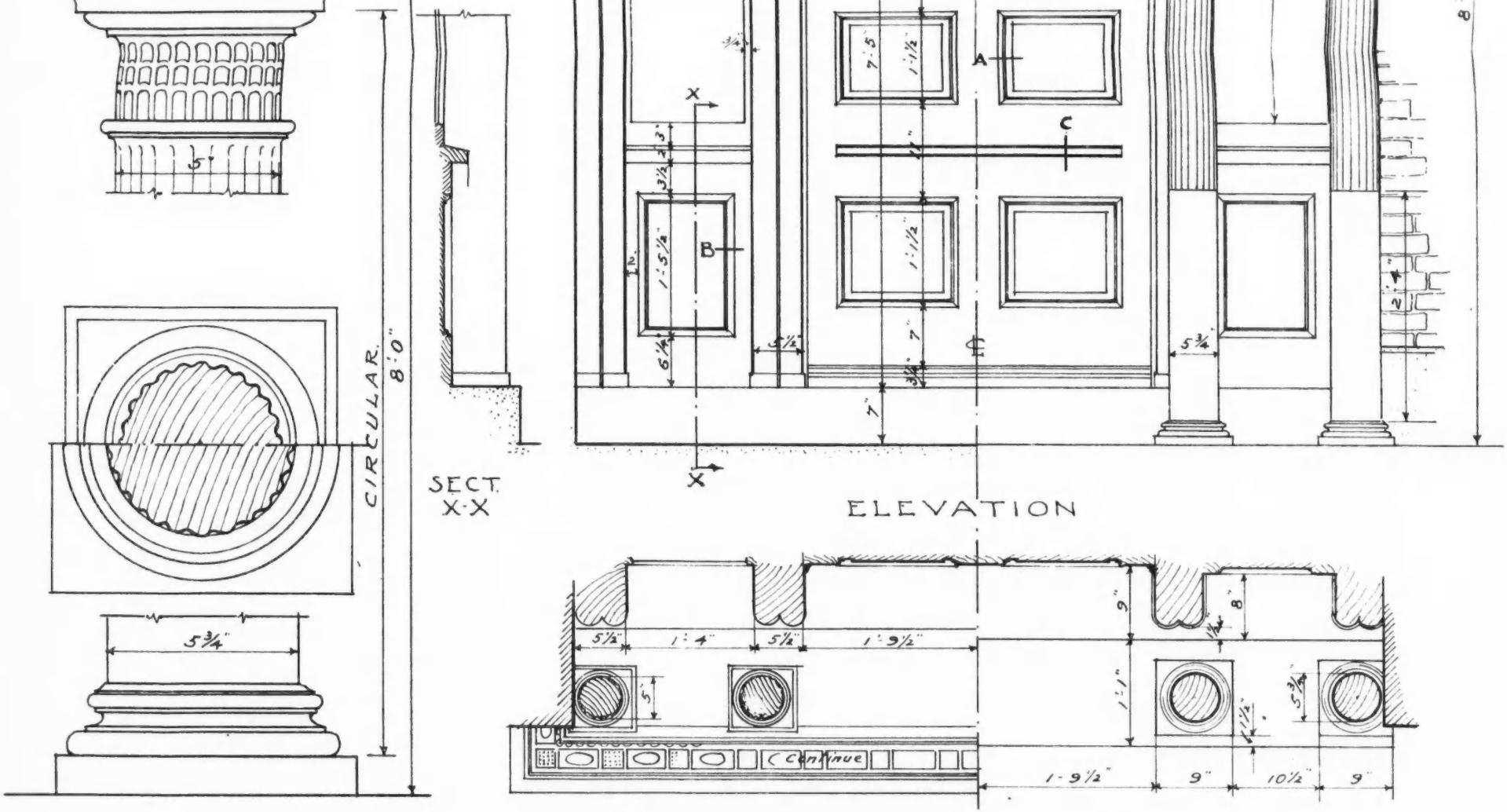


C

MOULDINGS
FULL SIZE







ORDER
ONE QUARTER FULL SIZE

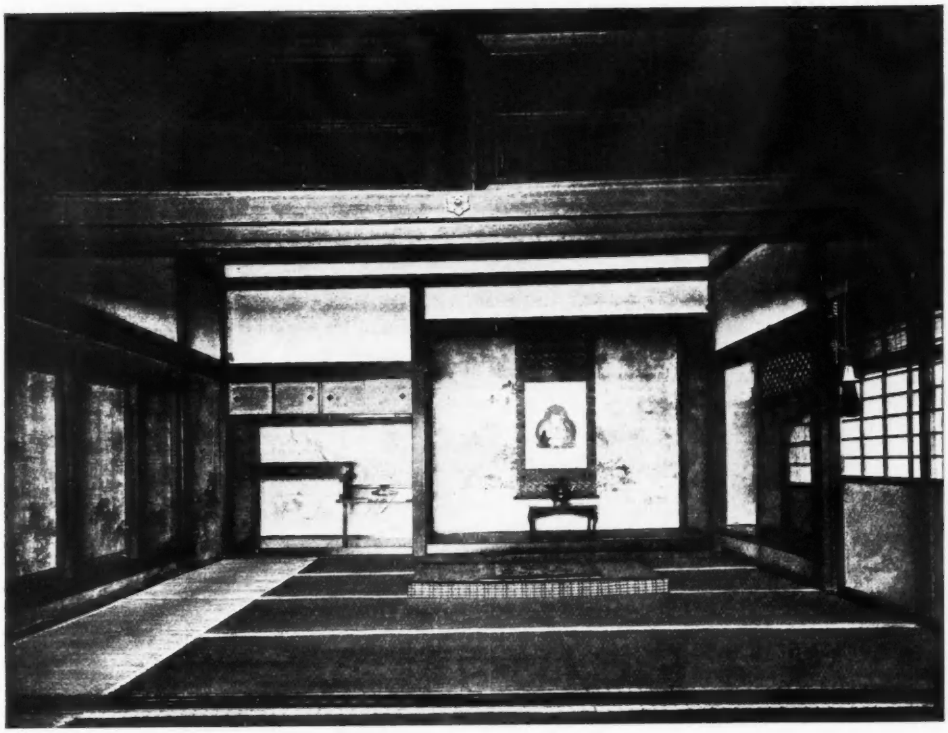
HALF SOFFIT PLAN REFLECTED HALF PLAN
¾" = 1'-0"

DOORWAY CHESTNUT STREET BOSTON MASS

R. KEITH HARRIS MENS. & DEL

SELECTED PRECEDENTS:

DECORATIVE LESSONS FROM JAPAN



1. *TOKONOMA AND CHIGAI-DANA.*

AT more than one period in the history of European art, when creative energy has seemed to be almost extinct, it has received fresh inspiration from the inexhaustible East.

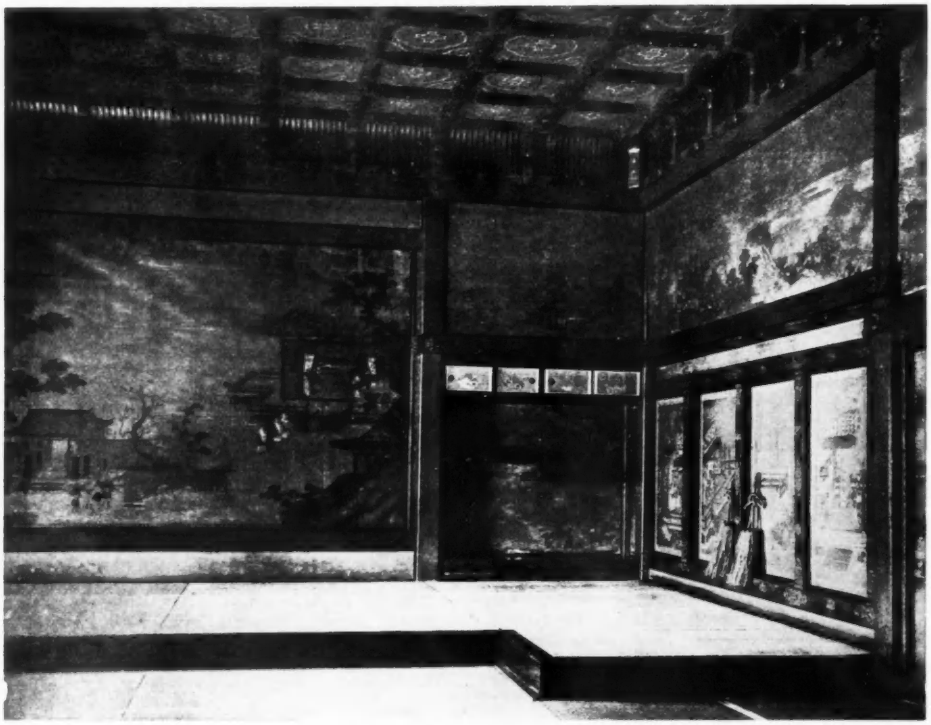
These three examples of old Japanese furnishings contain precedents of much modern interior decoration. "A quantity of ornament may materially injure but never can improve the effect of any composition," said Sir John Soane, and the moderns have, since the war, been hard at work "rationalizing" their decoration, relying for effect upon the sense of space and harmony of colour. Works by such artists as Mallet-Stevens, S. Chermayeff and Raymond McGrath seem to have transmuted the Eastern idiom for Western needs, and their art, far from being "jazz," is founded on true principles.

The scheme of figure **1** *includes posts and beams of richly coloured wood and tinted plaster walls. The frieze with the vertical channels and the glazing bars to the window on the right strike a modern note. In figure* **2** *the setting of the delicately-painted wall pictures in a scheme of gold and lacquer gives richness with austerity—the room of a patrician rather than a plutocrat. The parlour of figure* **3** *is remarkable for the fine lacquer frieze above the opening from which the rice-paper screen has been removed.*

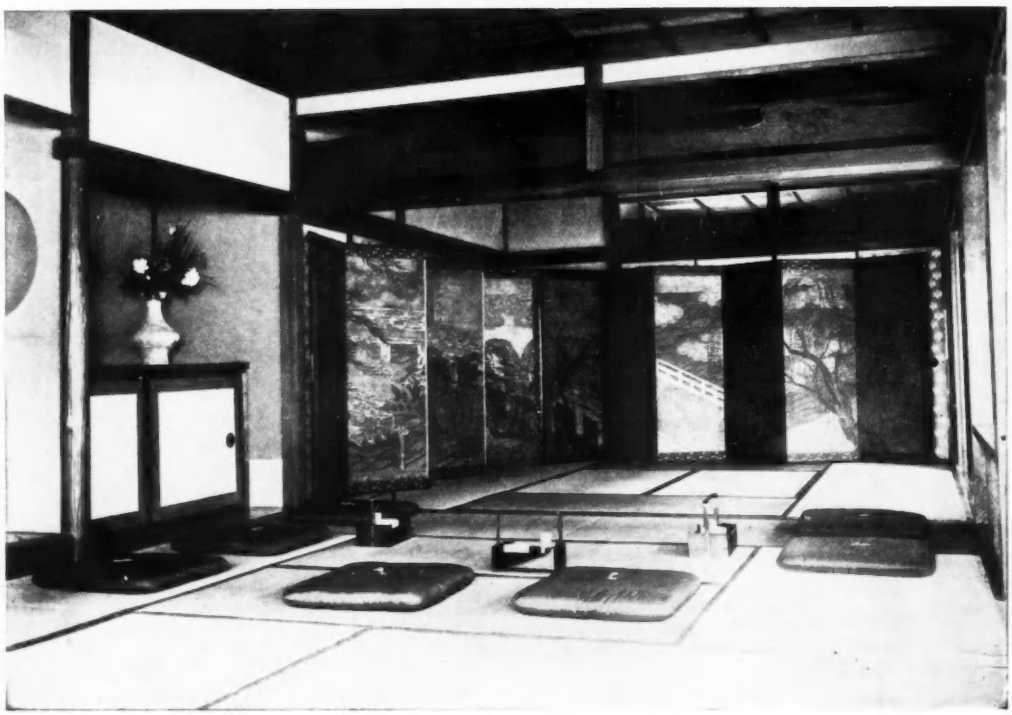
By a strange irony, Japan, which has given to the West exquisite examples of interior decoration, is in exchange greedily absorbing the worst Brummagem products of Late Victorian taste.

LL. E. WILLIAMS

Illustrations from "Impressions of Japanese Architecture," by Ralph Adams Cram (Harrap), which is reviewed on page 779 of this issue.

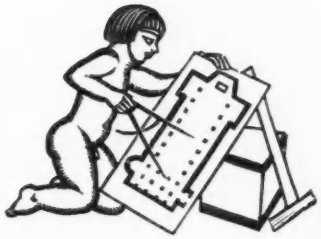


2. *A STATELY TOKONOMA.*



3. *A MODERN ZASHIKI OR PARLOUR.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, DECEMBER 9, 1931

BRINGING STEEL UP TO DATE

IT is a remarkable fact that England, acknowledged by every other country to be the originator of modern building in steel, should still be debarred by old-fashioned legal enactments from making proper use of this valuable material. Improvements in the manufacture of steel and advances in structural technique have produced a cumulative result that makes Paxton's Crystal Palace seem even more remote than the old penny-farthing bicycle. No one expects the modern motorist to comply with regulations devised to protect the population of these islands from the ravages of primitive cyclism. But steel constructors, who have certainly gone forward no less far along the road of progress, remain hopelessly fettered by official safeguards long out of date.

There are signs today that this unhappy state of affairs will soon come to an end. The steel industry of Great Britain has entered upon a plan of research more ambitious than any similar effort undertaken by any other country. The first *Report* on this work was published the other day. A summary of its most important provisions will be found elsewhere in this issue. This Steel Structures Research Committee, as it is called, has, under the chairmanship of Sir Clement Hindley, reviewed the standards obtaining in Germany and the United States, and on the basis of this survey it has drafted a constructional code which should be of the greatest practical benefit to this country. Further, the committee is carrying on its investigations by experimenting with actual buildings on a scale never before attempted.

The results of another year's work are expected to carry the provisional code now issued into an improved form, giving a maximum of economies in large commercial and industrial buildings. The science of building as a whole, hampered by legal enactments, has retained too much that is merely traditional in its methods, and the national economy has not benefited by a rational exploitation of the most recent achievements in steel and steel construction and other materials. An entirely fresh light will be shed on building problems by the research now in progress.

It is not generally recognized what a large field for industrial activity is afforded by the building industry, and how severe a handicap a contraction of building operations must become to a vast number of manufacturing trades. In attempting to make a contribution to cheaper and more efficient steel-frame building, the committee is engaged in a work which will occupy the front rank in the reconstruction which must be undertaken throughout the country. And this is not all, for an interesting aspect of the committee's work is the close contacts established with the Dominions and the Colonies, and a process of rationalization throughout the Empire which will lead to a uniform Empire standard and lead to simpler and easier trading relations. Trade follows the technical standard as well as that other which is the flag, and the work of the steel industry in promoting the most scientific methods cannot fail to carry with it the greatest advantages to Empire trade.

Mr. Stanley Baldwin has blessed the report with a preface in which he draws attention to the great spirit of enterprise shown by the steelwork industry through the British Steelwork Association. " It reflects great credit," he says, " on the leaders of the structural steel industry that intense trade depression, which has affected their industry more seriously than many others, has not held them back from devoting money and energy towards studies of the fundamental principles of technique and practice. The British Steelwork Association, in seeking to foster development in this way, has taken a far-sighted view. In full sympathy with this view, the Committee of Council, on the advice of their Advisory Council, and after consulting the Institution of Civil Engineers, had no hesitation in agreeing that the Department of Scientific and Industrial Research should accept the responsibility for devising and aiding the scheme of co-operative investigations.

" It is an encouraging feature of modern civilization that, whenever the cause so requires, there are forthcoming men of the highest ability who are ready to give freely of their services, without thought of reward. The membership of the Steel Structures Research Committee and Panels, and the generous collaboration of all those who have been approached by the Committee for information and assistance, give further evidence, if it were needed, of this lofty spirit."

MODERN STEELWORK PRACTICE ON THE CONTINENT

The above illustration shows the steel framework of Erich Mendelsohn's new building in Berlin, which he has designed for the Bellevue-Immobilian A.G., Berlin.

Columbus Haus, as the building is called, is a notable contribution to modern commercial architecture. It stands at the corner of Bellevuestrasse and Potsdamer Platz, one of Berlin's busiest thoroughfares.

Mendelsohn's design embraces some most striking features in steel structural work, the whole front of the building being cantilevered out with a complete absence of columns, foreshadowing a particularly light and graceful exterior.

The whole question of structural steel practice in this country has been undergoing scrutiny by an expert research committee, whose first report is discussed in detail on pages 767-770 of this issue, in comparison with the existing London County Council Regulations.

NEWS & TOPICS

STEELWORK RESEARCH

THE report of the Steel Structures Research Committee is a very valuable document, about which I have no doubt there will be a deal of comment in the JOURNAL and elsewhere. Its major recommendation concerns the need for a scaling down of factors of safety, which so long as the scientific study of structural steelwork remained unco-ordinated were liable to be high, and in practice wasteful. Far higher standards are prescribed than are necessary, while progress in materials and methods of construction have made building regulations obsolete.

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The Committee which has been scrutinizing the question in all its bearings is constituted, under the chairmanship of Sir Clement D. M. Hindley, K.C.I.E., as follows :

Commander W. R. Gilbert, R.N.; Messrs. J. H. Humphreys, M.I.STRUCT.E., J. E. James, C. J. Kavanagh, O.B.E., J. D. Stitt, D. Anderson, M.INST.C.E., R. Freeman, M.INST.C.E., B. L. Hurst, M.INST.C.E., E. S. Andrews, M.INST.C.E., O. Faber, O.B.E., G. Topham Forrest, F.R.I.B.A., and C. Gribble, M.INST.C.E.; Professors C. Batho, D.SC., M.INST.C.E., Sir H. C. Harold Carpenter, PH.D., C. E. Inglis, O.B.E., F.R.S., M.INST.C.E., M.I.MECH.E., M.I.STRUCT.E., A. J. S. Pippard, M.B.E., D.SC., M.INST.C.E., M.I.MECH.E., and A. Robertson, D.SC., M.INST.C.E., M.I.MECH.E. The Secretary is Mr. A. Zaiman; the Executive Officer, Dr. R. E. Stradling, M.C.; and the Technical Officer, Mr. C. H. Lobban, D.SC., M.INST.C.E.

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The code of practice recommended in the report will reduce the tonnage of steelwork in building, but it may, if architects are quick to realize what changes in design are implied by the more scientific use of steel, increase the amount of structural steelwork carried out. It is, of course, useless to talk of saving steelwork so long as architects go on putting up Unilever Houses and Midland Banks and other great masses of stonework, beneath which the steelwork is hidden : economy is not to be mentioned in the same breath.

DECENTRALIZATION OF ARCHITECTURAL EDUCATION

Sir Edwin Lutyens is a firm believer in decentralizing architectural education. Speaking at the sixth annual dinner of the I.A.A.S., of which he is President, Sir Edwin wished that students might start in the country and be in no hurry to reach the city. The city student, he thought, had too easy access to the solutions of problems, and learned them before he could absorb the problems themselves. It was hard for both old and young to fight on the side of beauty against mercenary battalions in their imposing uniforms of efficiency and economy. Beauty demanded from all and every one of them a measure of sacrifice, if they were to save the countryside. It was the country that taught us the observance of good manners, consideration of environment and of neighbours, be they of stone or flesh—qualities that Sir Edwin feared were lost in our cities by owners who, for their own insistent private needs, were impelled to sacrifice those of the public.

★

In Dean Inge, who also spoke, the country has, it seems, a modern Guy Fawkes. He advocated the abolition of the House of Commons, because, " as long as one class has power to impose burdens without limit on another class, which is practically disfranchised, we are not likely to get justice or economy " ! But the " gloomy " atmosphere was, to some extent, dispelled when the Rt. Hon. P. J. Pybus, Minister of Transport, optimistically assured us that, as a result of the co-operation between architects, surveyors and engineers, our present-day railway and electric-power stations proved that a structure might be efficient and at the same time beautiful.

DESIGN—OR DECLINE !

The annual dinner of the Design and Industries Association last Friday concluded Mr. Clough Williams-Ellis's long and very valuable term as president, a term remarkable for the ferocious activity of its attack upon the spoliation of the national landscape. With Mr. Frank Pick as the new president, the Association is to embark upon a programme that will tackle very thoroughly the job for which the D.I.A. was founded—namely, the encouragement of design in industry; and I believe we shall see during the next few years an enlargement of its influence within and outside the bounds of industrial production, for as the Prince of Wales remarked in his most stirring message to the Association, the attacking point of competition has largely moved from the centre of quality to that of design, and the building up of a school of designers and design-minded business men is now to become a task of tremendous importance. It is, veritably, design—or decline.

INDUSTRIES AT CAMBRIDGE

Professor Abercrombie has written a letter to *The Times*, pointing out the danger of any attempt on the part of the Corporation of Cambridge to attract industries to the town by definitely laying down considerable industrial zones on the outskirts. It may sound at first as if industrial development would bring material gain, but, as Professor Abercrombie indicates, there is more loss to be suffered from industrial housing than can be offset by gains from factories. Add to this the many new problems of traffic congestion, involving central reorganization and reconstruction, and it may easily happen that the rise will be more noticed in the rates than in anything else. National planning policy, one would say, would look upon Cambridge, and even at this late date, Oxford, as sufficiently useful in their particular ways to be scheduled as not to be touched by industry.

SMOKE AND INCOME TAX

The annual report of the Smoke Abatement Society shows that, like many another similar body, it has had to contend with the general movement of retrenchment. The national saving through the absolute consumption of smoke would take off a third from the income tax, and I wish I knew clearly what difficulties in the way of complicated mechanism and capital expenditure prevent manufacturers from pocketing such a substantial sum of money. Difficulties there appear to be in plenty, great enough, it seems, to invalidate the Smoke Abatement Act of 1926, which the Institute of Civil Engineers have washed their hands of, and which local authorities find trouble in administering.

GARDEN MODELS

Undoubtedly the model is the most satisfactory way of showing a garden to a client, and the idea behind Mr. Kenneth Brook's recent exhibition at Harrods is interesting. You can buy your model material in parts—the clipped hedges and peacocks, pergolas, pools, pavements—and arrange them how you please. It is not, however, an idea that will appeal to the designer, for whom Mr. G. A. Jellicoe is now catering in the JOURNAL, since he is forced to a standardization of detail, and the ultimate garden is not

his own. The detail is sound, but commonplace. For children they are admirable, and would provide scope for the imagination. As table centres they could not compare with the Spanish tiled garden models exhibited in London a few years ago; the bizarre detail of these raised them from naturalistic representations to works of art, related to the spoons and forks and other furnishings of the dinner-table.

A PRACTICAL ARTIST

The exhibition held at Messrs. Batsford's Galleries, 15 North Audley Street, W.1, of a section of the work of Mr. Paul Nash shows yet another side of this versatile artist—his designs and decorations for books. Paul Nash, unlike so many other modern painters, does not confine himself to landscapes, but, as this exhibition shows, has designed stage settings which are easy to understand, and abstract designs which, in a series called "Urn Burial," are satisfying and alive. It is encouraging to see an artist who is willing to draw not only framed pictures to hang on walls, but also designs for fabrics and binding papers, and the furniture and colour schemes of rooms. If other artists as good as he would follow this example, there would be more enlightenment in modern design.

*

The accompanying illustration is from the series of stage designs made for "King Lear," published in *The Player's Shakespeare* (Benn, 1927). The drawings were made from models constructed by the designer. In this storm scene the effect of the rain is got by taut strings clamped to the stage and set above, like rigging on a ship. Across this dense rigging light is constantly swept—up and down and across—so that the "rain" is kept in motion. Flashes of brighter light break at intervals, while light is used in yet another way to affect the whole structure of the scene so that it appears to sway fantastically, like the mind of Lear himself.

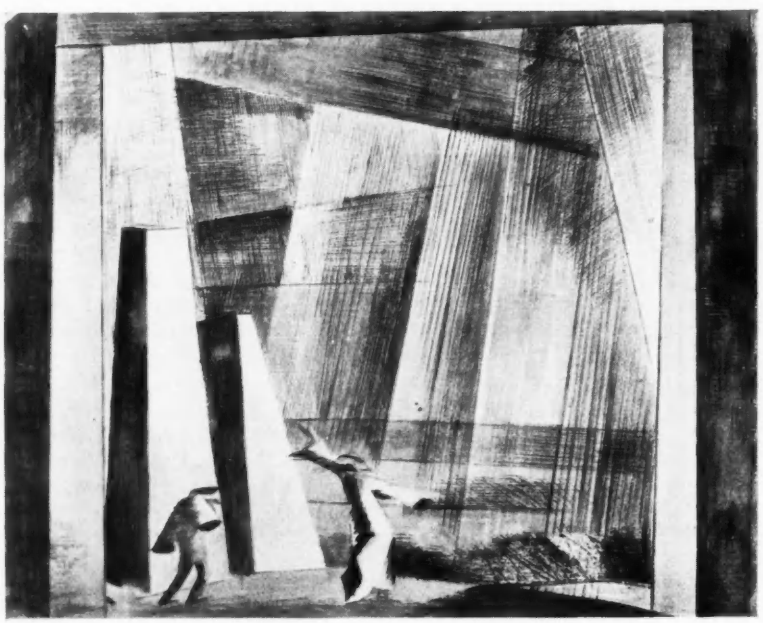
ASTRAGAL

Planning the Town

DR. RAYMOND UNWIN, P.R.I.B.A., in delivering the last of the Architectural Association's series of public lectures at 34 Bedford Square, W.C., on Saturday last, after expressing the hope that the Town and Country Planning Bill would be passed during the next session of Parliament, said the method of town growth on which town and regional planners were agreed called for the control of the continuous haphazard accretions round the fringe of the built-up areas of towns, a form of growth which produced increasing constriction, deprived the central functions and areas of any opportunity for natural expansion, and pushed the open land, to which the inhabitants needed access for health and recreation, farther and farther away as building round the fringe extended.

In place of this continuous haphazard spreading outward there should be a grouping of new development into compact units, as self-contained and self-sufficing as possible, to each of which there should be reserved its adequate quota of open land for games, recreation, etc. Planning would then begin by distributing the units of new urban or suburban development as a well-designed pattern of building units, carefully distributed on a green background of open land. Having secured those main dispositions of building development units and open space, and solved the problem of separating the through traffic routes from the service roads, the planner, whether in the centre, the outskirts or in the country, could approach the detail planning of the areas allocated on lines appropriate according to whether they were intended for industrial, commercial, residential, recreational or cultural use.

Until there were available rational plans based on the requirements of present-day life and modern traffic facilities, we should go on increasing the confusion and the difficulty, and making costly blunders through dealing with problems in isolation. With such plans the detail designing of each area could be undertaken to adapt it to its particular purpose, to reduce useless traffic by placing the parts in suitable relations to one another, and to develop the amenities which the sites might afford. Upon such a plan there might arise buildings suitably assorted and beautifully grouped and designed, so that something of the dignity and charm of our old towns might be recovered.



The Storm scene from "King Lear" (Act III, scene 2), designed by Paul Nash from a model made by himself. This design, which is described above, is one of the set prepared for *The Player's Shakespeare* (Ernest Benn, Ltd., 1927), and shown at the recent exhibition of the artist's work.

MATERNITY HOME AT OXFORD

DESIGNED BY STANLEY HAMP (COLLCUTT AND HAMP)

THE new maternity home at the Radcliffe Infirmary, Oxford, forms the first part to be completed of the ambitious extensions of the hospital for which appeals for funds have been made during the past three years. It is the gift of the President of the Infirmary, Sir William Morris, BART., D.C.L., and was officially opened a few weeks ago by the Duchess of York. Sir William Morris has not only given the home, but has also presented to the Infirmary and to the University Medical School jointly the adjoining site occupied by the Radcliffe Observatory.

The maternity home is built of multi-coloured bricks, the elevations being partly rendered in white cement, and the roof is covered with red tiles. Metal casement windows are fitted.

The building is four stories high, except the two main wards. These comprise two stories only, the roofs being used for large open-air sun flats having access for beds.

The ground floor contains the pre-natal clinic, with emergency labour ward, sisters' quarters, nurses' lecture-room, sitting and dining rooms, and kitchen, and maids' dining room. Waiting-room accommodation for visitors is also provided.

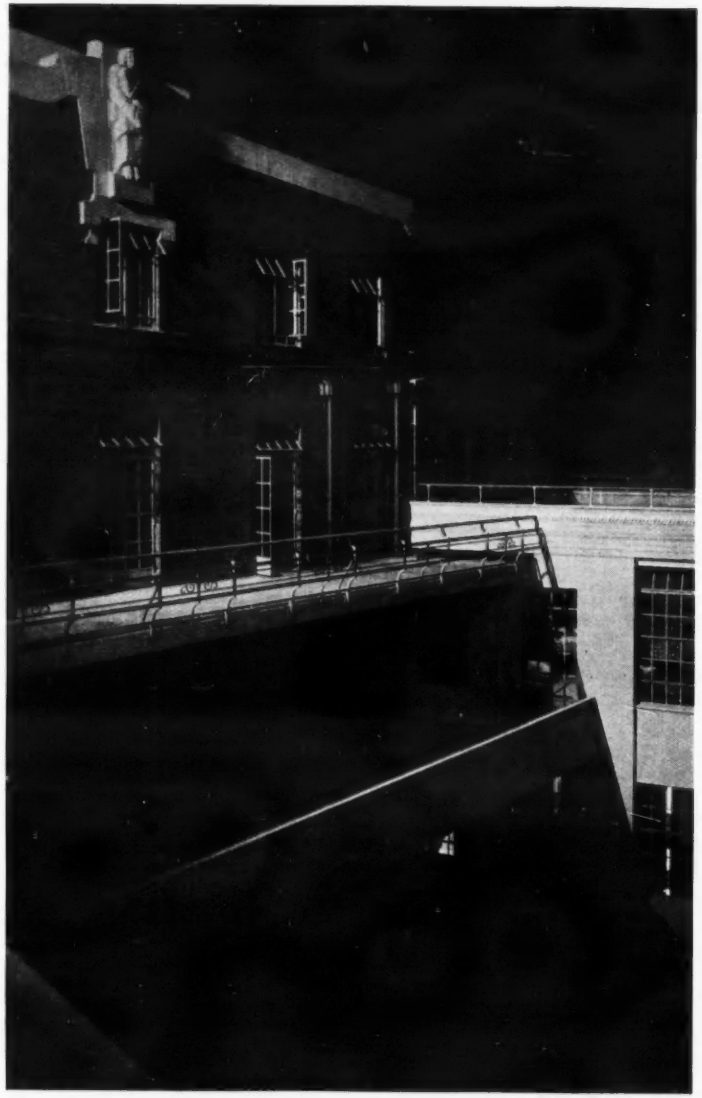
On the first floor are the two main wards, each with provision for twelve beds. Other single and two-bed wards occupy the remainder of the floor, together with the large night nursery, babies' bathroom, room for sick babies, and the necessary service rooms, bath-rooms, and storerooms.

The second floor contains the rooms for paying patients, isolation rooms, and a suite of labour wards with all necessary service rooms.

The third floor is devoted to staff rooms, consisting of bedrooms for mid-wives, nurses and maids.

The architect was Mr. Stanley Hamp, F.R.I.B.A., of Collcutt and Hamp, the consulting engineer, Mr. John F. Farquharson, M.I.C.E., and the quantity surveyors were Mr. R. E. Bennison and Messrs. Fleetwood Buss and Anns.

A glimpse from the roadway of the new maternity home at the Radcliffe Infirmary, the gift of Sir William R. Morris, BART., D.C.L. The gates and railings are of wrought iron. The vases were carved by P. G. Bentham.



Maternity Home, Oxford.]

Looking, after dark, from the sun balcony across the entrance front and showing the figure of "Maternity," carved by Laurence Bradshaw.

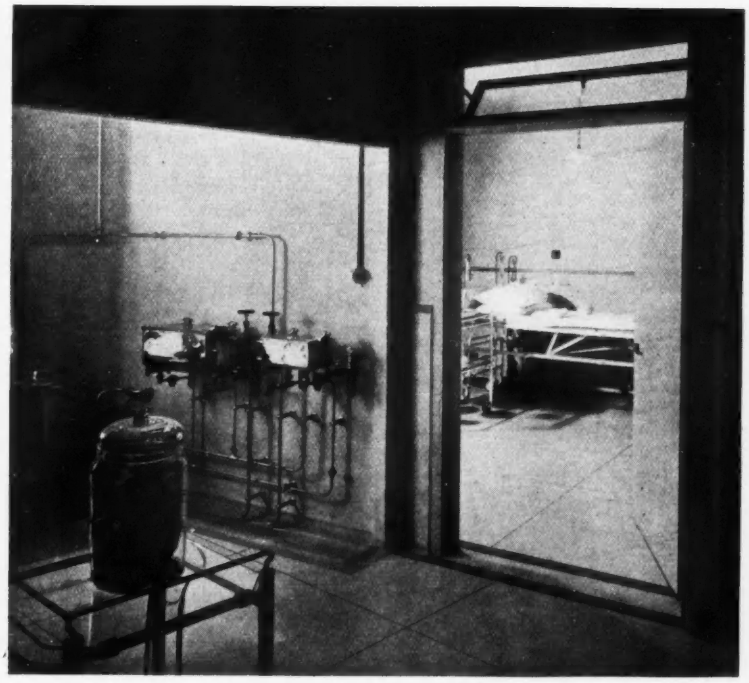
[*By Stanley Hamp (Collcutt and Hamp).*

The main entrance doorway and lobby by night. The surround is of artificial stone, and the doors and linings are oak, with fanlight in wrought iron. Note the harmony of treatment in the soffit of balcony.

One of the two general wards on the first floor. The walls of all the wards are coloured pale primrose yellow, and the floors are in blue and white rubber. The margins on which the beds stand are in blue and white Terrazzo.

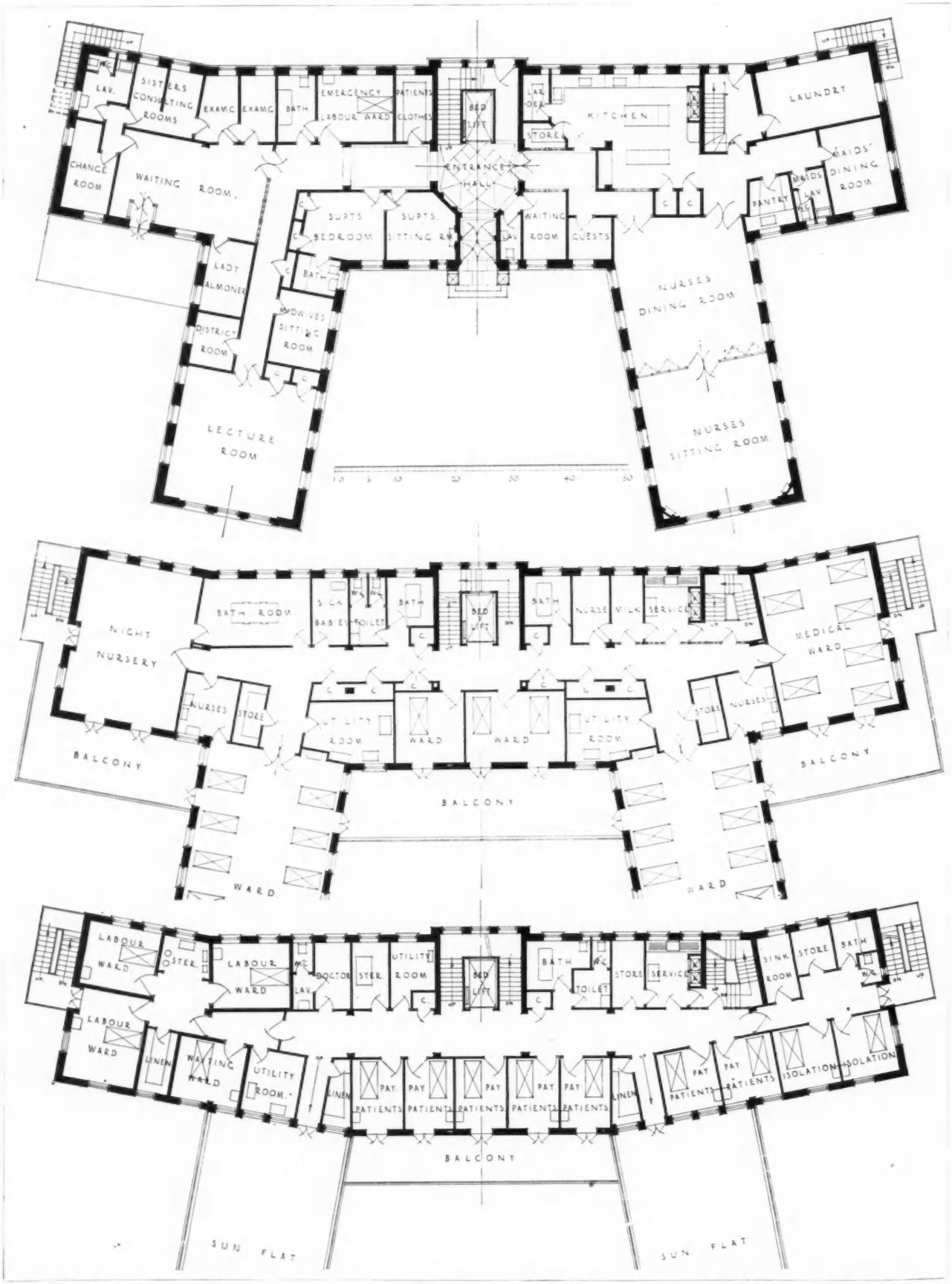
Maternity Home, Oxford.]

A corner of the babies' bathroom, on the first floor, showing typical bath fittings.



[*By Stanley Hamp (Collcutt and Hamp).*

Looking from the sterilizing room on the second floor into one of the labour wards. Behind the camera are two more labour wards, completing the unit.



Maternity Home, Oxford.] [*By Stanley Hamp (Collcutt and Hamp).*

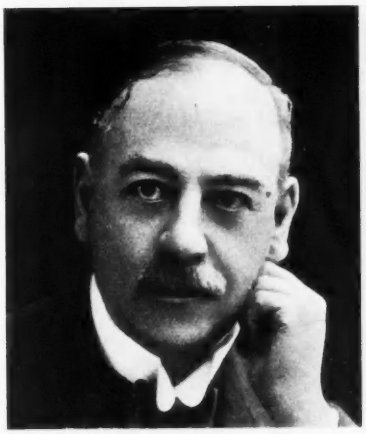
Plan of the ground floor and part plans of first and second floors. Each of the general wards on the first floor accommodates twelve beds. On the third floor are bedrooms for seventeen nurses and four maids.

STRUCTURAL STEEL IN BUILDING PRACTICE

The Research Committee's Recommendations Reviewed

BY ALEXANDER H. HAYES

Sir Clement D. M. Hindley, K.C.I.E., M.INST.C.E., chairman of the Steel Structures Research Committee.



G. Topham Forrest, F.R.I.B.A., superintending architect of the L.C.C., the only architect member.

COMPLAINTS that restrictive regulations prevent the full application of modern technical developments are by no means uncommon. What is uncommon is any well-considered proposal for adjustment which takes properly into account the object of the regulations and also is supported by sound evidence.

In the First Report of the Steel Structures Research Committee, Department of Scientific and Industrial Research, for the period ended March 31, 1931, which has just been published,[1] we find a welcome exception. The report represents the first eight months of the Committee's work of (*a*) reviewing the present methods and regulations for the design of steel structures, including bridges, and (*b*) investigating the application of modern theory to structures, and making recommendations for the translation to practice of such results as would appear to lead to more efficient and economical design.

It has long been felt in the steel industry that full advantage is not being taken of the excellent qualities which steel possesses as a material for building construction. Building codes and authorized practice, which ignore recent advances in technique, and the use of stress calculations not sufficiently refined, are held to be partly responsible. Hence the work of the Committee, with the object of extending the efficient uses of steel.

SCOPE OF THE RESEARCH

Needless to say, a cursory investigation and hasty recommendations would be valueless. The scope of the work will be appreciated when it is stated that no fewer than seven panels have been formed to deal with the various sections. These are considering respectively the following subjects :—

I : The external loads on buildings, floor loads, wind pressure and wall construction, with a view to reducing dead loads.

II : Estimation of the stresses set up in existing buildings and measurement of actual movement and strains.

III : Stress analysis and the effect of eccentric loading.

IV : Materials; the determination of yield point in steel, safe stresses and methods of test.

V : Struts, reviewing practice and formulæ.

VI : Welding.

VII : Vibrations in structures.

The practical work of research is being conducted under the general direction of Dr. R. E. Stradling, the Director of the Building Research Station at Garston, near Watford. Part of the work is being done at the Station, part in the National Physical Laboratory, and some at the Universities of Birmingham and Bristol.

It may be mentioned that the Committee is not concerned with administrative action for translating the results to practice. The means already exist for dovetailing into existing procedure for the statutory control of buildings the suggested rules and recommendations which will be formulated.

C. J. Kavanagh, O.B.E., Secretary of the British Steelwork Association, and a member of the Steel Structures Research Committee.

The recommendations put forward in the First Report relate only to the work of Panel I. Before discussing these, however, it will be interesting to glance at the work of the other panels.

SOME IMPORTANT PROBLEMS

The statement of the problem before Panel II points out that all practical calculations and designs of structures are, and must be, based on assumptions which are only approximations to the truth. Stanchion ends are assumed to be so accurately machined and erected that an upper length bears uniformly on a lower length. In practice this is but partially realized. Beam reactions are frequently taken as giving direct bearing on the midpoint of stanchion brackets, and eccentric stresses in stanchions calculated accordingly. In practice, the top cleats of the joint introduce a partial fixity of end connection which operates to modify this eccentricity. Stiffness of the joints also influences the beam stresses; the effect of casing in concrete adds to stiffness; and the concentricity of the bearing on the base introduces other factors.

For these and other reasons the comparison of measured stresses with calculated ones is necessary as a check on methods of calculation. Some work has already been done by the Panel on the distribution of stresses in a simple plated steel stanchion, and further, a strain gauge designed for use in the tests.

Shear tests on steel **I** beams, conducted by Panel III, indicate that in plain beams the tendency, where restraints are not imposed, is for failure to occur in torsion, the top and bottom flanges rotating in a horizontal plane about a central vertical axis. It is important, therefore, that such forms of failure be

[1] H.M. Stationery Office. Price 5s.

prevented by proper top cleats connecting beams and stanchions. When torsion failure is prevented, and the points of support are at the ends of the beam, the failure appears to occur by vertical buckling of the web over the end supports.

In beams which were allowed to overhang the supports, the additional stiffness of the ends increased the failing load for both plain and compound girders. This increase in the tests was about 12 per cent. for plain beams and about 70 per cent. for the compound members.

From the work so far done on struts, no very definite conclusions can be drawn. While stress analysis shows that the vertical members in a steel building frame are subjected to such bending moments that they should be considered rather as beams than as struts, it is not yet possible to give a reliable estimate of the maximum moment likely to be experienced by any particular stanchion. Professor Andrew Robertson emphasizes the point that strut analysis is only of paramount importance when dealing with a member which has a relatively small eccentricity of loading, for unless the strut is a very slender one, the addition to the effective leverage of the end load due to the actual bending of the strut is small. With some types of attachment the bending moment transmitted to the struts may be so large that the strut action is almost negligible.

In the work of Panel VI, the co-operation of certain welding firms has been secured and enabled the investigators to embark on a comprehensive programme.

THE PROBLEM OF LOADS

Reverting now to the work of Panel I, it is pointed out that, although the "floor loads" insisted upon by various building regulations are known in many cases to be greatly in excess of the actual loads resting on the floors, their reduction to a figure approximating to the actual loads existing on floors is not yet justified. Although practical experience has proved that the methods of design are safe, yet, because these are not based upon a complete scientific analysis, any numerical factors, such as "floor loads" or "maximum allowable stresses," are nothing more than constants in a series of empirical formulæ, and it is impossible to consider changing them into actual loads on floors or higher allowable stresses until a thorough overhauling of the methods of design has been carried through.

The correct analysis of the stresses in a building framework rests upon the conception that the stress in no member of that framework is independent of the stress in others, while the extent of dependence is controlled by the degree of rigidity of the connections. The problem of struts scarcely exists when the structure is looked at from this point of view, for the bending introduced by the "unconscious eccentricity" of strut action is so small compared with the bending moments introduced into columns from beams that the strut, as such, can be neglected.

With this need for a revolution in the methods of stress analysis, the amount of revision that can be recommended at present in building codes is not very substantial in fundamental matters of design. It is, nevertheless, possible, in the light of technical experience, to remove many restrictions which have proved to be onerous, and this has been attempted in the recommendations for a code of practice set out at the end of this First Report.

THE PROPOSED CODE ANALYSED

In the following notes the principal recommendations are summarised and comparison made with the existing requirements under the London Building Act and associated Regulations. Actual quotations are in small type.

MATERIALS

Cement and Concrete.—The specifications for concrete are substantially the same, except that the Committee's code prohibits clinker, whereas the Regulations allow furnace clinker in plain concrete walls.

The factors of safety suggested for concrete are higher than the present L.C.C. Regulations, but are in complete agreement with those recently issued by the Ministry of Transport for bridge work.

Hollow Blocks for Walling.—Hollow blocks for non-bearing walls with an aggregate width of voids, measured horizontally at right angles to the face of the block as laid in the wall, of two-thirds the total thickness of the block, shall have a minimum crushing strength, in lbs. per square inch, calculated on the gross area, as follows:

Hollow concrete blocks	700
Hollow blocks of brick-earth or clay	450

In cases where the aggregate width of voids is less than two-thirds of the total thickness of the block, the minimum crushing strength shall be increased in the proportion of

$$3 \times \left\{ \frac{\text{thickness of block—width of voids}}{\text{thickness of block}} \right\}$$

The existing Regulations for the use of hollow blocks for external walls between reinforced concrete pillars and beams call for 8½ ins. aggregate thickness, a minimum of 2 ins. for the side and 1 in. for end partitions, the clear and unsupported span of any part to be not more than four times the thickness of that part.

Bricks.—The minimum crushing strength of bricks, in pounds per square inch, shall be:

Engineering bricks (*a*) ..	10,000
Engineering bricks (*b*) ..	5,000
Building bricks (*c*)	3,000
Building bricks (*d*)	1,500

Mortar for Brickwork.—The recommendations on this point would appear to be more stringent, calling for 3 : 1 of sand and cement, as against 4 : 1 now required, and 2 : 1 of lime and sand as against 3 : 1.

Cement mortar, "3 : 1," shall be mixed in the proportion of 3 cub. ft. of clean silicious sand and 90 lbs. of cement.

Lime mortar mixes for the jointing of panel walls shall be such as will set in forty-eight hours.

Lime mortar, "2 : 1," shall be mixed in the proportion by volume of two parts of clean aggregate to one part of lime putty of the usual consistence, or one part of dry hydrate, and shall be such that the set mortar is sound and of good strength.

DESIGN

Encasing of Steelwork.—The existing Regulations stipulate that all pillars and girders in external walls must be completely enclosed and protected from fire by brickwork or other incombustible material 4 ins. thick, properly tied and bonded or secured to the adjoining work, parts other than external walls similarly cased 2 ins. thick, and the upper surfaces of girders and joists 1 in. thick. The Committee's recommendations are more specific in demanding, for buildings of the highest grade of fire resistance, fire-resisting materials of similar thicknesses properly applied to all steelwork:

Of the above casings at least 2 ins. of thickness in immediate contact with pillars and beams where built into external and party walls and 1 in. in immediate contact with all other pillars and beams shall be of 1 : 2 : 4 cement concrete properly reinforced with steel wire lattice of not less than 2-in. mesh, or equivalent reinforcement. Where the casing is of 3 ins. of properly reinforced concrete it need not be in contact with the steel.

The above requirements do not apply to . . . . . industrial workshops, storage sheds and hangars, of one story height, or to other buildings of one story not exceeding 25 ft. in height; and as regards the topmost story of all buildings, they apply only to pillars and beams where built into external walls.

Panel Walls of One Thickness.—The present requirement is a minimum thickness of 8½ ins. for the top 20 ft., and 13 ins. below where 20 ft. is exceeded. The recommendations call for an increase on 8½ ins. where either the horizontal or vertical span between supports exceeds 13 ft.

Panel walls constructed entirely of one thickness of either solid brickwork or hollow blocks shall be of at least 8½ ins. overall thickness throughout, exclusive of rendering, plaster or other decorative finish. In cases where the clear span of such walls between steel supports (either horizontally or vertically, according to which is the lesser) exceeds 13 ft., the thickness thereof shall throughout be increased by at least 2 ins. for each 3 ft., or fraction thereof, of such excess span. Any such additional thickness shall not be provided by unduly increasing the width of the mortar joints.

Reinforced Concrete Panel Walls.—Here the recommendations are in line with the existing requirements.

Faced Panel Walls.—Panel walls constructed of bricks or hollow blocks with a facing of either brick or stone work, shall be at least 12 ins. overall thickness throughout, exclusive of rendering, plaster or other decorative finish. In cases where the clear span between steel supports (either horizontally or vertically, according to which is the lesser) of such walls exceeds 16 ft., the thickness thereof shall throughout be increased by at least 2 ins. for each 3 ft. or fraction thereof of such excess span.

Any such additional thickness shall not be provided by unduly increasing the width of the mortar joints. The brick or stone facing shall in all cases be either bonded or otherwise adequately secured to the backing.

Cavity Panel Walls.—At present hollow walls must have a wall on one side of the hollow space of the full thickness prescribed in the London Building Act for walls. The recommendations are more in keeping with the utility of this type of wall in stipulating two solid walls of 4¼ ins. minimum thickness, tied in accordance with spacing up to 9 ins. apart :

Panel walls of brickwork or stonework may be constructed as cavity walls formed of two solid walls or shells, each not less than 4¼ ins. thick, spaced not more than 3 ins. apart and tied together across the cavity at the rate of one tie to every square yard of cavity area, the vertical spacing of ties to be approximately one-half their horizontal spacing.

The two shells may, however, be spaced more than 3 ins. apart, but not more than 9 ins. apart, provided that the number of ties is increased in direct proportion to the cavity width. The clear span of single panel of cavity wall between steel supports (either horizontally or vertically, according to which is the lesser) shall not exceed 13 ft., nor shall its clear overall area exceed 200 sq. ft.; provided that this limit may be exceeded where one of the thicknesses of the solid work conforms to the requirements of panel walls of solid brickwork or hollow blocks.

Permissible Overhang.—In no case shall a panel wall or a shell of a cavity wall overhang the concrete casing of the supporting beams by more than one-third in all of the thickness of the wall or shell, and in every instance where the overhang beyond the top flange of the supporting beam exceeds one-third of the thickness, plus 2 ins., the concrete girder casing shall be reinforced in combination with an adjoining floor slab in such a way as to transfer the load axially to the beam.

A cavity wall, the base courses of which are built solid for the full width of the wall, may overhang to the same extent as a solid panel wall.

Party Walls.—These of solid brickwork may be 13½ ins. thick, provided that they are supported by beams at a distance apart vertically not exceeding sixteen times the thickness of the wall.

Steel Pillars.—Recommendations are made in regard to base plates for steel pillars, in keeping with the necessity for proper stress distribution if maximum permissible stresses are to be extended. These and the associated recommendations include the machining of pillar ends, the fabrication of all steelwork as far as possible in the works, the character of bolts and rivets and their spacing.

LOADS

A comparison of the suggested superimposed loads and those at present required to be allowed for in various types of buildings shows a radical reduction in every case. The present L.C.C. requirements have been added to the table showing the Committee's figures, for convenience of comparison. The suggested figure for domestic and similar floors is in line with the existing requirements in New York and Germany. A comparison of requirements in different countries shows a wide divergence, even after allowing for local conditions. The adoption of the suggested figures would have an important influence on the design of steel structures, as the load reductions suggested range from 8 to 50 per cent.

Roof loads, similarly, are reduced radically, from 56 lbs. to 30 lbs. for angles of less than 20 deg., and from 28 lbs. to 15 lbs. for greater angles.

Further, the reduction of superimposed loads, which the existing Regulations allow for stories below the top story, are considerably increased in the recommendations. At present, the top story and first below must be calculated at 100 per cent., with a reduction of 5 per cent. (maximum allowance 50 per cent.) for each succeeding lower story. The suggested allowance is 10 per cent. reduction for the first below the top and 10 per cent. for succeeding floors below, with a maximum of 50 per cent. The reductions, however, are not to be allowed on any floor scheduled for an applied loading of 100 lbs. or more per sq. ft.

Dead Load.—Where the positions of partitions are not definitely located in the design, a uniformly distributed load sufficient to allow for them is to be added to the dead floor load, the minimum total allowance for internal partitions in offices to be at the rate of 20 lbs. per sq. ft. of floor area.

Superimposed Load.—For the purpose of calculating the loads on foundations, pillars, brick or stone piers, walls and beams in buildings, the minimum superimposed load on each floor and on the roof shall be estimated as equivalent to the following dead loads :

	Lbs. per sq. ft. of floor area.	*L.C.C.*
Rooms used for domestic purposes, hotel bedrooms, hospital rooms and wards	40	(*70*)
Offices, floors above entrance floor	50	(*100*)
Offices, entrance floor and floors below entrance floor	80	(*100*)
Churches, schools, reading rooms, art galleries and similar uses	70	(*112*)
Retail shops and garages for cars of not more than two tons dead weight ..	80	(*112*)
Assembly halls, gymnasia, light workshops, public spaces in hotels and hospitals, staircases and landings, theatres, cinemas, restaurants and grandstands	100	(*150*)
Dance halls, drill halls ..	120	(*150*)
Warehouses, book stores, stationery stores and similar uses, together with garages for motor vehicles exceeding two tons dead weight : actual load to be calculated, but not less than	200	(*224*)
	Lbs. per sq. ft. of covered area.	
Flat roofs and roofs inclined at an angle with the horizontal of not more than 20°	30	(*56*)

On roofs inclined at an angle of more than 20°, a minimum superimposed load (deemed to include the wind load) of 15 lbs. per sq. ft. of surface shall be assumed acting normal to the surface, inwards on the windward side and outwards on the leeward side, this requirement to apply only in the design of the roof structure.

All floors, except those for 40 lbs. per sq. ft., shall be capable of carrying in any position on an otherwise unloaded floor an alternative concentrated load as follows : Entrance floors and floors below the entrance floor of office buildings, 2 tons; all other floors, 1 ton; for garages for motor vehicles exceeding two tons dead weight, 1·5 × maximum wheel load; in each case considered as equally distributed over 2 ft. 6 ins. square.

In the case of subsidiary floor beams entirely embedded in concrete, and spaced not wider than 3 ft. centre to centre, the concentrated load may be regarded as borne equally between two beams.

Wind.—All buildings, other than those indicated below, shall be so designed as to resist safely a wind pressure in any horizontal

direction of not less than 15 lbs. per sq. ft. of the upper two-thirds of the vertical projection of the surface of such buildings, with an additional pressure of 10 lbs. per sq. ft. upon all projections above the general roof level. On the sea coast, and in similarly very exposed situations, a further provision not exceeding 10 lbs. per sq. ft. shall be made.

If the height of a building is less than twice its average width, wind pressure in general may be neglected, provided that the building is adequately stiffened by floors and walls.

The suggested requirement of resistance to a wind pressure of 15 lbs. per sq. ft. and an additional 10 lbs. on projections above the roof level, compares with 30 lbs. at present demanded. The suggestion that wind pressure need not be provided for in the case of a building of less height than twice its average width is in keeping with a similar relaxation in the New York regulations.

It is pointed out by Dr. Stanton that wind velocities corresponding to a pressure of 30 lbs. have rarely been recorded in the most exposed station in this country, while in London the maximum velocity corresponds to a pressure of about 19 lbs. per sq. ft. The pressure on a building of rectangular form would be appreciably less than this. On the other hand, existing regulations ignore the possibility of damage to buildings by the lifting of the lee side of the roof.

WORKING STRESSES

Working Stresses in Steel.—Here again the recommendations are in favour of the structural steel engineer. At present the L.C.C. requirements set limits of 7·5 tons per sq. in. for tension and compression, 5·5 tons for shear and 11·0 tons for bearing, as against 8 tons, 5·6 tons and 12 tons per sq. in. recommended—figures approximately the same as required in New York.

The permissible deflection in beams is increased to $\frac{1}{325}$ part of the span, compared with $\frac{1}{400}$ part required by the present Act.

The suggested permissible working stresses on pillars and other compression members, however, are not increased consistently in comparison with the existing requirements. For the ratio 20 of effective pillar length to least radius of gyration, the suggested working stress in tons per sq. in. gross section is 7·2 (as against 6), but at the ratio of 100 it is 3·8 as against 4, lower than the existing figure then being suggested for ratios up to 180, at which both are 1·5. The L.C.C. figures reduce to zero at 210 ratio, but the Committee permits 0·9 at 240.

It is further recommended that the calculated working stresses in grillage beams entirely embedded and void filled in solid concrete foundations of proportions at least 1 : 6 may exceed those specified above by 50 per cent.

Pressures on Subsoil.—The permissible figures put forward are the same as now required by the L.C.C. :

	Permissible load on ground. Tons per sq. ft.
Alluvial soil, made ground, very wet sand	Up to ½
Soft clay, wet or loose sand	1
Ordinary fairly dry clay, fine sand or loam	2
Firm dry clay	3
Compact sand or gravel, London Blue or similar hard compact clay	4
Hard solid chalk	6
Shale and soft rock	Up to 10
Very hard rock	Up to 40

Pressures on Concrete Foundations.—While the present maximum stipulated is 12 tons per sq. ft., the Committee recommends figures ranging from 5 to 40 tons, according to the composition of the concrete—a much more rational suggestion :

The bearing pressure, in tons per square foot, on foundations formed of cement concrete shall not exceed the following values :

1 : 1 : 2 concrete	40
1 : 1½ : 3 concrete	35
1 : 2 : 4 concrete	30
1 : 6 mass concrete	20
1 : 8 mass concrete	15
1 : 10	10
1 : 12	5

Pressures on Brickwork.—Permissible loads here also are extended, ranging from 4 to 20 tons, according to the character of the brickwork. The existing restriction is 5 tons for ordinary brick in cement mortar, 8 tons for hard brick, and 12 tons for blue brick :

The pressure in tons per square foot upon properly bonded and solidly bedded brickwork shall not exceed the following :

On engineering bricks (*a*) set in 3 : 1 cement mortar	20
On engineering bricks (*b*) set in 3 : 1 cement mortar	15
On building bricks (*c*) set in 4 : 1 cement mortar	10
On building bricks (*d*) set in 4 : 1 cement mortar	8
On building bricks set in 2 : 1 lime mortar	4

The above pressures may be exceeded by an amount up to 20 per cent. in all cases where such increased pressure is only of a local nature, as at the girder bearings.

For isolated brick piers without proper lateral supports, the above stresses are for a slenderness ratio :

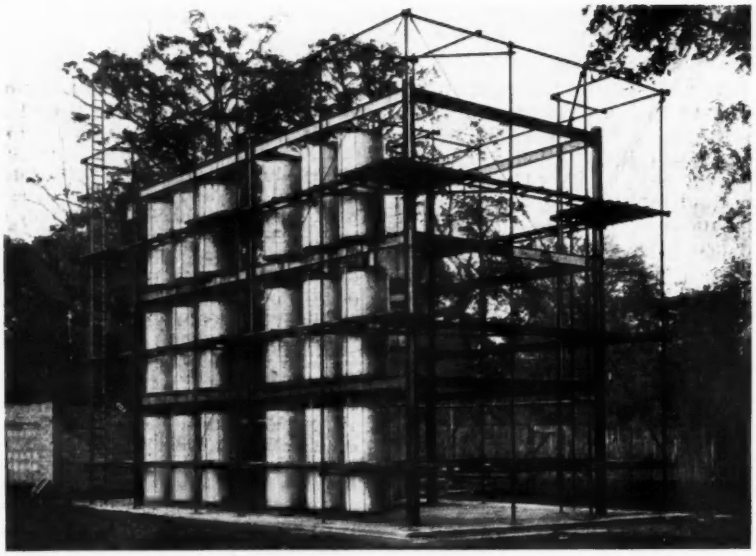
$$\frac{\text{height}}{\text{least dimension (D)}} \left(= \frac{L}{D}\right) \text{ not exceeding 6.}$$

The stresses are to be reduced as follows for high slenderness ratios :

Value of $\frac{L}{D}$	8	10	12
Stress reduced to : per cent. of above stresses.	80	60	40

The permissible pressures upon masonry may be classified as for brickwork, according to the crushing strength of the stone, provided that, for ashlar masonry constructed of large blocks of good quality dressed stone, the corresponding permissible pressures may be increased up to 50 per cent.

No isolated brick or masonry pier shall have a higher slenderness ratio than 12, or a width less than 13 ins.



The steel frame of a three-story building, equipped with water tanks for loading, erected at the Building Research Station, Garston, near Watford, in order to obtain data as to the degree of fixity existing in practical connections, and the distribution of stress obtained with considerable degrees of fixity.

NOS. 19—23 WELLS ST., W.

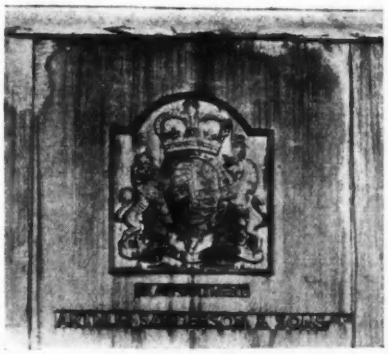
DESIGNED BY RICHARDSON AND GILL

THIS new building was originally designed for the use of Messrs. Arthur Sanderson and Sons, Ltd., the wallpaper and paint manufacturers of Berners Street, W., but the floors have now been sublet to various individual tenants.

The main façade has a frontage of about 105 ft. to Wells Street, a thoroughfare running from Oxford Street to Mortimer Street, and the rear elevation faces Wells Mews. This latter, a public right of way, is connected to Wells Street by a cartway, which had to be preserved in the rebuilding scheme.

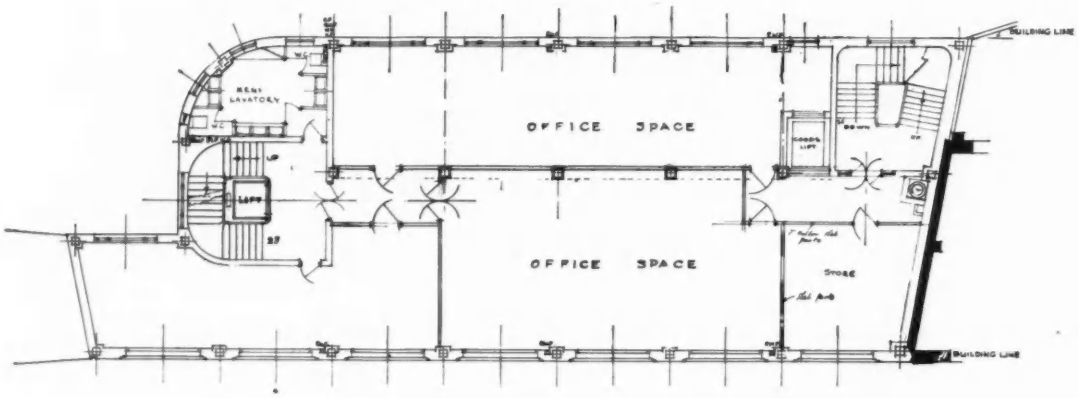
The building is of fireproof construction, and comprises basement and sub-basement, shops at ground level, with showrooms and offices over, and a large studio in the roof. The main entrance at the left of the principal façade leads through the vestibule to the staircase and lift which serve all floors. Marble plays a prominent part in the design of the vestibule and staircase. Special study has also been given to the finish of the lift, which is lined with leather and chromium-plated metal strips. There are also separate entrances to the shops on the main front, and to the building from Wells Mews at the rear, where also is the goods lift.

The treatment of the Wells Street front is simple, the materials being marble for the ground story and special 2-in. white bricks for the upper part. A feature of the design is the curved

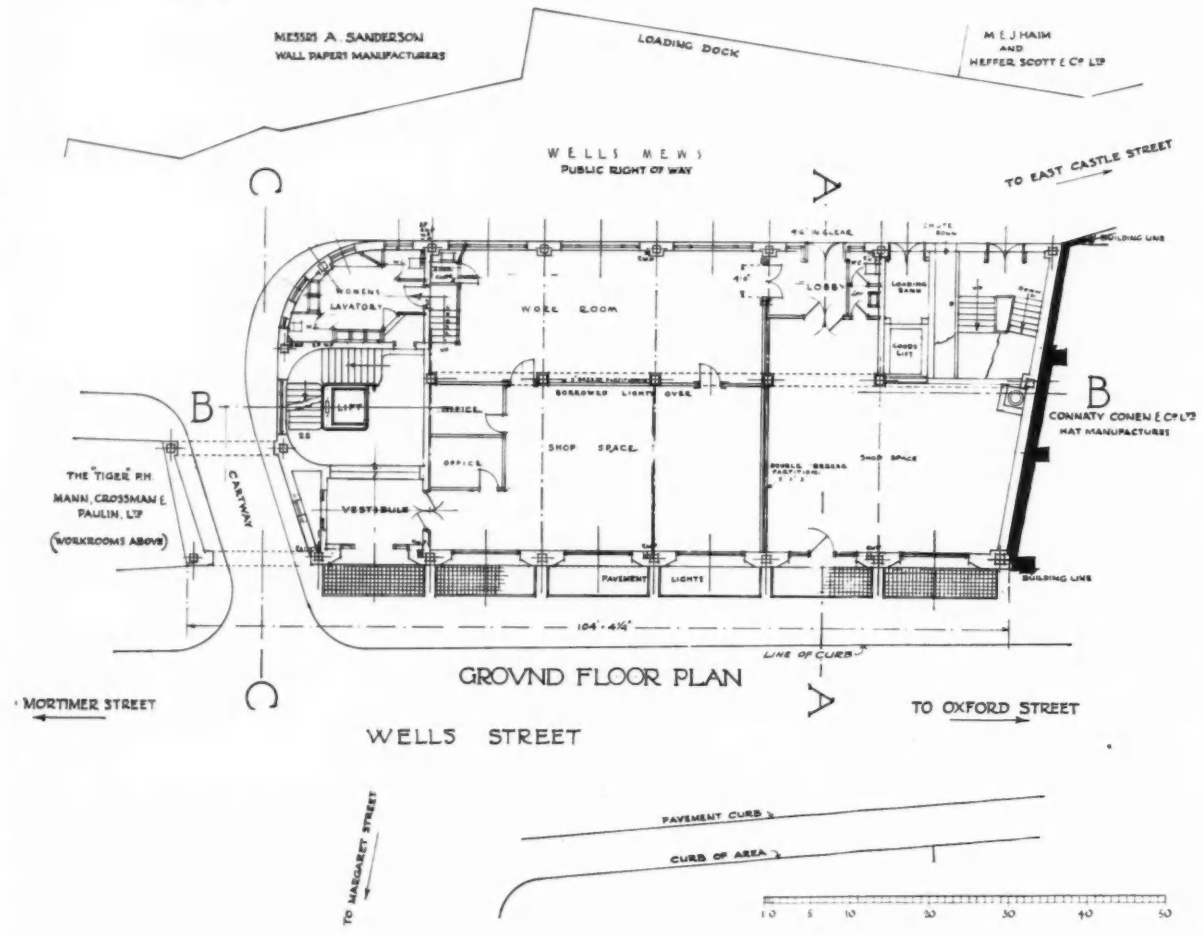


The coat of arms over the cartway entrance on the main façade. P. G. Bentham was the sculptor.

The main façade to Wells Street. The ground story is faced with marble, above which the elevation is of 2-in. white bricks. The roof is curved and covered with copper. The cartway on the left leads to Wells Mews, and had to be preserved.



FIRST FLOOR PLAN



Nos. 19–23 Wells Street, W.] [*By Richardson and Gill.*

Ground- and first-floor plans. There are a basement and sub-basement, shops at ground level, with showrooms and offices over, and a large studio in the roof. Light is obtained both from Wells Street and Wells Mews.

Nos. 19–23 Wells Street, W.] [*By Richardson and Gill.*

The lift and a staircase landing. The former is lined with leather and chromium-plated metal strips. Marble plays a prominent part in the design of the entrance vestibule and staircase.

roof, which is covered with copper. The back elevation is faced with glazed brickwork. The scheme involved the demolition of some Early Victorian buildings which stood on the site of the ancient wells in Wells Street.

LETTERS FROM READERS

Plaster for Concrete Ceiling

SIR,—I agree with the writer of the letter on the above subject in your last issue, that the use of a well-advertised liquid, as suggested by him, certainly makes hacking completely unnecessary, and there appears to me to be no reason why a single coat of plaster should not be sufficient for the purpose. I would go further than this, and would suggest that in many cases it would be merely necessary to brush on a thick slurry with a strong whitewash brush, and let that be the actual final finish. If a further coat was required completely to remove all further inequalities caused by the shuttering, a further painted coat of slurry could be put on, both these coats being cheaper than the ordinary plastering, and, as practice seems to make perfect, it might well be that an almost smooth surface could be obtained in this manner where it was essential.

As regards the whole matter of economical building, this will actually become essential in the near future, and I feel that architects should investigate every possible means of cheapening the cost of building construction whilst remembering that economy in capital outlay must always go hand in hand with economy in annual upkeep. It is quite true that an increase in capital expenditure may sometimes very considerably decrease annual upkeep: this should be carefully borne in mind, as the two must go together. The so-called "New Architecture," which has been appearing on the Continent, is not the outcome of æsthetic considerations but is purely the result of strict economy in capital and annual outlay. I was talking a short time ago to one of the leading Berlin architects on this matter, and he assured me that this was strictly correct, and that economy was at the root of the new designs which were appearing. They were endeavouring as far as possible to let voids and solids make the design rather than depend on the academic adornments which have made up so much of the so-called architecture of the pre-war period.

C. E. ELCOCK

Bernard Whistlow, F.R.I.B.A.

SIR,—Bernard Whistlow must not be entirely condemned, for although the practice of architecture is an art, and as such is totally different from a commercial undertaking, this is not appreciated by the "business man," who, without being offensive, places the architect in the same category of job-grabbers as his own commercial travellers.

This attitude is unfortunate, inasmuch as it makes normal practice impossible without constant diplomatic endeavour to attract new work. It has become a trite saying that, with the exception of the eminent few, it is infinitely harder to obtain new work than it is to execute it, and although one man may have spent his lifetime in the study of his profession, another, not so capable, but with the knack of ensuring a continuous flow of work to his office, is a success in the eyes of the world. This is exemplified in the number of offices where the architect is totally employed in angling for jobs, and his staff in carrying them out. This is not so bad as it sounds, however, as in some cases a principal may not be so capable as his chief assistant.

It would appear, therefore, that our admittedly competent Bernard is, after all, only earning an honest livelihood and keeping his charming wife and himself at a decent standard of living, and so, when we leave him, according to Mr. Creswell, at the summit of his career, looking back with repugnance on his former wiles, I wonder, would he choose rather to be poor? I think not. For, with all his faults, Whistlow is not a lunatic.

E. W. PALMER

The Bolsheviks as Builders

SIR,—Though Mr. Clough Williams-Ellis may disprove many of the current English views about Russia, he cannot deny that the Soviet is in debt. And no wonder! What country could embark on such a magnificent building programme without having to borrow money? Only when Russia is adequately industrialized and the best-equipped nation in the world (thanks to foreign loans) will the debt be paid.

England, cancelling or postponing its competitions and building schemes,

can only invent legends about a country whose enterprise she dare not rival. I would that England had a deficit due to the expense of development instead of one due to the number of unemployed. And, surely, the lull in development is one of the chief causes of unemployment.

SOLLY'S GEORGE

A Village Museum

SIR,—The gallant effort of Mr. Arthur Keen in forming a record of Oxted reminds me of the village museum started some years ago at Petersham. The collection of historic mementoes includes the only example known to me of a body-snatcher's basket, a beautiful thing of woven wickerwork, left behind by some surprised rascal in the churchyard. (The Westminster Theatre should have borrowed it for that fine play, "The Anatomist.")

There are also relics of Lord John Russell, who built the "British School" in which the museum is lodged. Drawings of old buildings in the parish, by local inhabitants, adorn the walls. Amongst the documents is an *Architectural Review*, containing photographs of many of the old mansions in the neighbourhood. The caretaker of the schools keeps the exhibits duly dusted, and relieves the visitor of a nominal fee.

P. M. STRATTON

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Housing Progress in England and Wales

IN reply to Mr. Thorne, Sir E. Hilton Young said that the following statement showed the number of houses completed in England and Wales each month from January to October, 1931, inclusive, under the Housing (Financial Provisions) Act, 1924, and the Housing Act, 1930.

Month.	Housing (Financial Provisions) Act, 1924.	Housing Act, 1930.	Total.
January ..	4,127	16	4,143
February ..	4,163	—	4,163
March ..	5,049	—	5,049
April ..	4,903	2	4,905
May ..	5,425	57	5,482
June ..	6,054	64	6,118
July	5,681	84	5,765
August ..	5,201	55	5,256
September ..	5,520	142	5,662
October ..	6,230	247	6,477

Houses Approved by Ministry of Health

Mr. David Davies asked the Minister of Health if he would state for each month of this year up to the latest available date the number of houses approved by the Ministry under the various Housing Acts.

Sir E. Hilton Young said that the following statement gave the desired particulars :

Month.	Number of State-assisted houses included in proposals approved for England and Wales during the month.
January, 1931	5,532
February ,, ...	4,240
March ,, ...	5,321
April ,, ...	10,273
May ,, ...	6,627
June ,, ...	8,543
July ,, ...	8,917
August ,, ...	7,816
September ,, ...	1,433
October ,, ...	3,797

Housing Proposals Deferred

Mr. G. Hall asked the Minister whether any local authorities had been asked by the Ministry of Health to defer housing proposals; and whether he proposed to take any action under the default powers conferred by the Housing Act, 1930, against the local authorities who were neglecting their responsibility to provide additional housing accommodation in their district.

Sir E. Hilton Young said that the reply to the first part of the question was in the negative. As regarded the second part, he was not at present aware of any instance in which he ought to consider default action.

Housing : Retrenchment by Local Authorities

Mr. Hicks asked the Minister of Health whether it was proposed to take any action against those local authorities which had decided to reduce the schemes for house-building below the number specified in their five-year programme.

Sir E. Hilton Young said he did not know of any case in which such interference with the discretion of a local authority was necessary.

Mr. Harris inquired of the Minister whether his department had held up any housing schemes submitted by local authorities since October 1 on the grounds of economy.

Sir E. Hilton Young said that there had been no instance of refusal to approve housing proposals on the ground of economy, but in present circumstances he had found it necessary to discuss with local authorities in certain cases some modification of their proposals with a view to securing the provision of a type of house which could be let at a lower rent than had been usual in the past. He had no information showing that local authorities had made any substantial curtailment of their programmes.

Slum Clearance

Mr. Salt asked the Minister if he could state the number of houses in England and Wales which were estimated to be dealt with under slum clearance schemes as part of the Housing Act, 1930, during the five-year period commencing January 1, 1931; and how many houses had been demolished under this scheme up to October 31 last or the latest available date.

Sir E. Hilton Young said that the estimate made by the larger urban authorities provided for the demolition of 57,000 such houses. The number actually demolished up to September 30 last was 201.

Houses by Instalments.

Mr. Palmer asked the Minister of Health whether, owing to the difficulty many purchasers of houses were faced with in having to meet their instalments, he would introduce legislation granting either a moratorium or a reduction of the amount of instalments to be paid, with necessary extension of periods of payment.

Sir E. Hilton Young said he had no reason to believe that the difficulty was at all widespread, and he was sure that such action as he suggested was neither necessary nor practicable.

Improvement and Reconstruction Schemes

Lieutenant-Colonel Fremantle asked the Minister of Health if he would state the number of houses demolished in connection with improvement and reconstruction schemes during the years ended September 30, 1930 and 1931, and the number of persons housed or re-housed under such schemes during those years.

Sir E. Hilton Young replied that during the years ended September 30, 1930, and September 30, 1931, respectively, the numbers of houses demolished under the Housing Act, 1930, and under improvement and reconstruction schemes confirmed under previous legislation were 1,930 and 2,290, but the number of persons actually rehoused during these years could not be stated.

Montagu House Site

Sir Vivian Henderson asked the First Commissioner of Works whether, in view of the need for economy, he proposed to proceed with the scheme to erect a large block of Government buildings on the Montagu House site and land adjoining it.

Mr. Ormsby-Gore said that though this scheme would eventually result in considerable economy in the annual cost of housing official staffs in the central London area, in view of the urgent necessity for restricting capital expenditure as far as possible, it was not proposed to proceed with the scheme at present.

PUBLIC HOUSE

At Southfields, S.W.

DESIGNED BY
FRANCIS J. HUMPHRY

"THE GARDENERS' ARMS," belonging to Messrs. Young & Co.'s Brewery, Ltd., is situated at the corner of Merton Road and Longfield Street, Southfields, S.W., and consisted originally of a pair of cottages which had been altered and adapted to the use of a beer house many years ago. Lately it was decided to pull down the old premises and erect a modern and up-to-date house on the site.

The reconstructed ground floor consists of public bar, saloon bar, dart room and lunch room, arranged round a central service bar, the main entrances to the bars being from Merton Road. The saloon bar is separated by a folding partition from the lunch room, so that they can be thrown into one if so desired, and a similar arrangement applies to the public bar and dart room. A service lift is arranged in the counter by the lunch room, and connects the service bar with the beer cellar in the basement, and the kitchen on the first floor. Lavatories are provided on the ground floor for men, and on the first floor for ladies, both easily accessible from any of the bars.

An entrance from Longfield Street gives access to the dart room and lunch room, and also to the staircase which leads to a large club room on the first floor, occupying the whole frontage to Merton Road. Behind the club room are arranged a private sitting-room, kitchen, larder, store, and ladies' lavatory. On the second floor are four bedrooms, &c.

The Merton Road front. Up to first floor level, the walls are finished in brown and green glazed tiles, above, in fine shingle rough cast, while the roof is of multicoloured, hand-made, sand-faced tiles. The name panels are glazed, and bear lettering in teak, gilt. The materials were selected to minimize the cost of upkeep and re-decoration. The floors are of special fireproof construction.

Plans of the ground, first and second floors. The planning of the building at road level is particularly interesting: around the central service bar are spaces normally divided up into lunch room and saloon bar on one side, and dart room and public bar on the other. But the partitions are folding, so that commodious floor-spaces are available for special occasions.

The elevations have been treated simply and symmetrically, and the tile and roughcast treatment was chosen in order to lessen the cost of external upkeep. Economy of labour has also been the governing factor in the internal finishings; wood-block floors in the public rooms, with non-slip tile surround to the counter, tiled floors and dadoes in the lavatories, bathroom, kitchen and larder, grained and varnished woodwork inside and out, and coved cornices to all rooms, all contribute to this end. Mr. Francis J. Humphry, F.R.I.B.A. (Young & Hall), was the architect.

THE THEORETICAL PLANNING OF GARDENS

BY
G. A.
JELLICOE

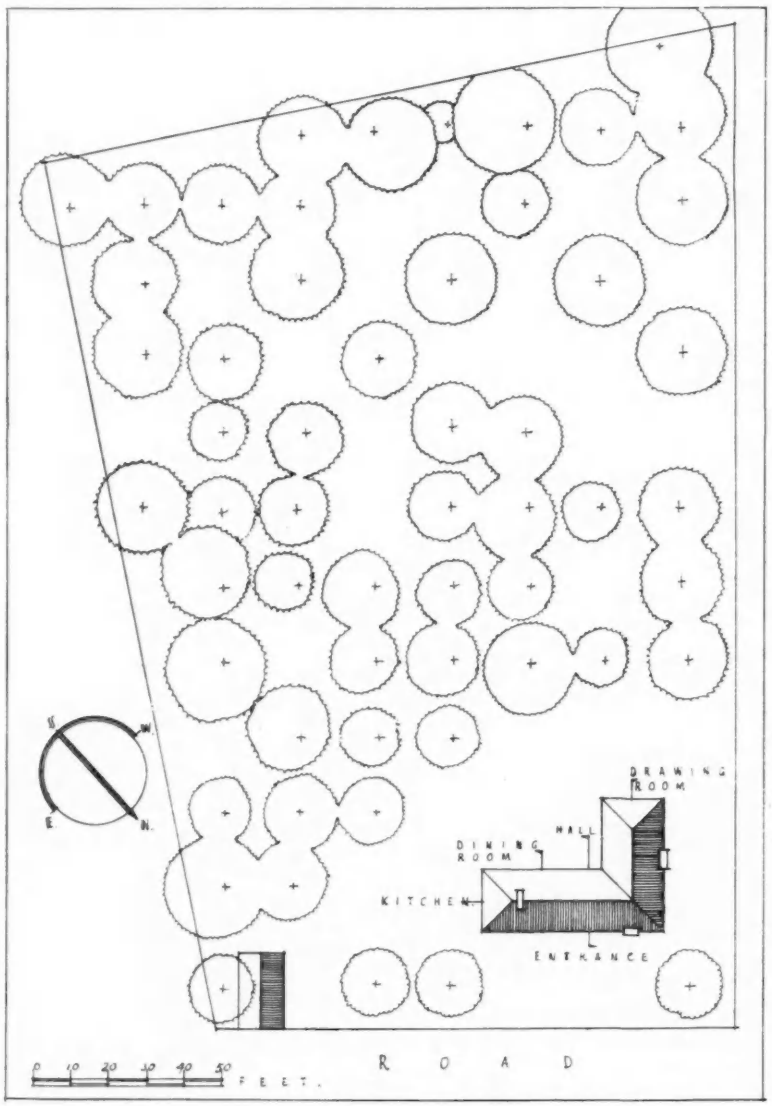
ii: The Orchard

WITHIN a few miles of London a number of orchards have in recent years been sold for building. Our client, who is a business woman, and the social editress of a London newspaper, has decided she must have a possibly small house where she can "get back to Nature." She is enchanted with a site among the apple-trees. Here is to be the realization of those dreams so brightly described in print. She builds a neat little house and garage, and calls for a cottage garden with some lovely flowers, a bower, paved paths, and a small secluded garden for the maid.

PSYCHOLOGICAL POINTERS

OUR client's car, her well-chosen furniture, the drink before dinner, the polished silver and glass, make us deduce certain things which are of the greatest importance in the initial stages of the plan. Our client is by nature a sophisticated woman of town associations, and though her wish to live in the country is a genuine and even a necessary one, she would soon tire of the whim of a cottage garden. She is not and never will be, like the countrywoman, the close associate of the old trees in their natural beauty.

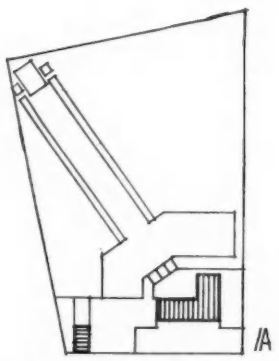
The problem, therefore, is to provide a garden in keeping with the house, to present the trees as a spectacle apart, and yet so to blend the two that the difference is not consciously apparent.



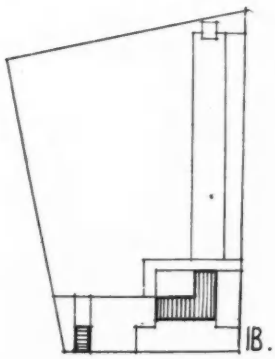
The material bestowed by Nature.

THE MAXIMUM VISTA; BUT—— !

The first block plan "A," which is so bad that we hesitate to show it, drives



a maximum vista through the orchard from the house. In this vista lies a garden, with lawns and formal planting and with, on either side, the orchard



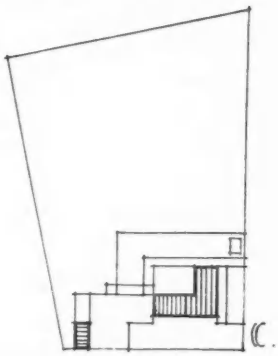
The attractive view is arranged to be seen at its best from the windows, but the plan can be discarded at once owing to its division of the orchard (which is the theme of the garden)

into two parts, and its essentially ugly relationship to the house and site.

STILL TOO PRETENTIOUS

This leads to block plan "B," which, on paper, is quite good. The garden builds round the site boundaries, which are themselves formal, and the orchard lies within. Clearly, however, it is still too pretentious.

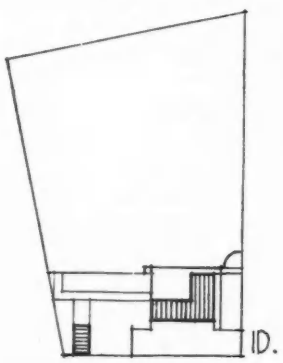
Block plan "C" has much more the required relationship between house,



garden and orchard. The part by the house is definitely a view garden; that is to say, it is a garden which is looking out in a certain direction for a certain reason. While, however, this plan is closely associated with the house, it is adrift from the site boundaries.

AN UNOBSTRUCTED VIEW

Block plan "D" gives an unobstructed view from the windows, isolates the herbaceous border, to be seen as a unit by itself, and places the summer-house where it will be easily accessible



from the house. To soften the too obvious abruptness between garden and orchard, a number of trees are left in the former, despite the detriment to flowers and hedges. From the orchard itself the house, the clipped hedge, and the garden should appear a single composition.

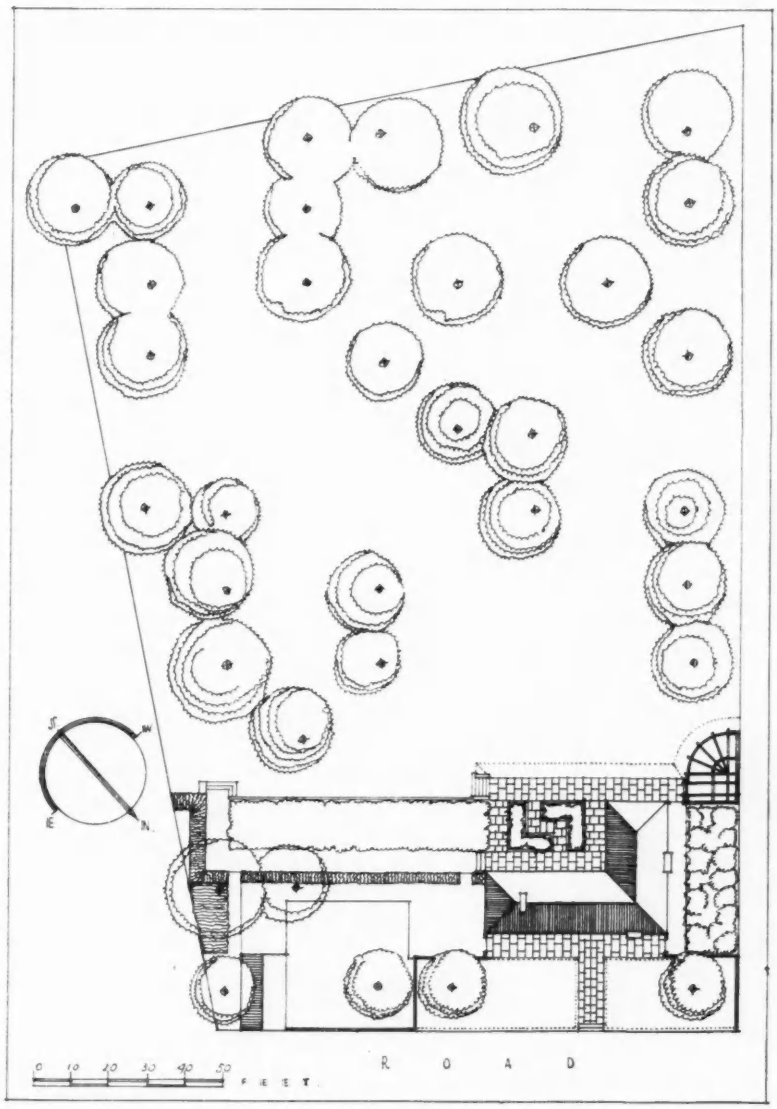
The essential difference lying between the character of the owner and that of the site has unwittingly stirred up some of the most vexed ideas in the history of garden design. The English school of landscape gardening that spread over Europe at the end of the eighteenth century, destroying or altering the old classic garden, was a just reaction against what had become a too rigid formula. Our orchard has been designed with the successes and failures of that movement in mind.

NATURE'S OWN CONVENTION

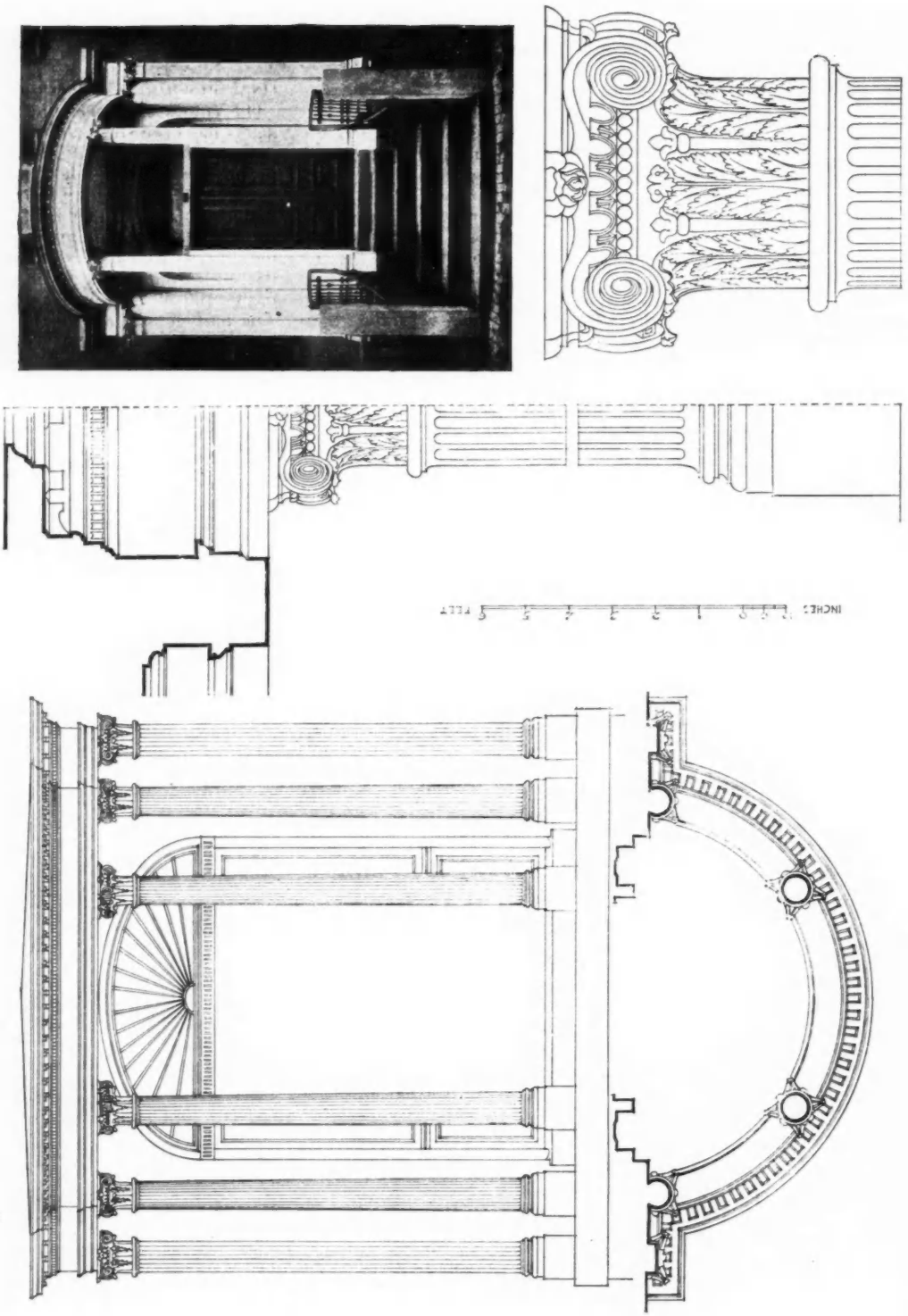
The poorer trees are cut out and the remainder left so grouped as to form a composed picture from the house. There are no summer houses nor gravel paths among the trees, for any association with conventional existence would destroy the illusion. There is no suggestion that this spectacle of Nature is realistic to the extent of seeing the trees growing in their natural setting, but, rather, that the character and shapes of Nature have set their own convention. Thus, the grass, which in its natural state under the trees would be extremely poor (if it existed at all), would be kept cultivated under a scythe, or (if upkeep would allow) considered as a lawn, properly rolled and mown.

FINAL RESULT: A COMPROMISE

The contrast between the two characters has been stressed for purposes of illustration. The result is a compromise, one that reflects the whole existence of the woman for whom it is designed. The struggle is that between the actor and the painter. The actor moves about his garden and is part of it; the whole logic of its terraces, paths and flowers is for his benefit. The painter arranges his material not as a fact to touch, but as a romance to be seen behind glass, like a picture.



The finished picture composed by art.



[*By permission of Messrs. B. T. Batsford, Ltd.*

Wood Porch at Salem, Massachusetts, U.S.A.

From The Orders of Architecture, *by Arthur Stratton, F.R.I.B.A.*]

LITERATURE

THE ORDERS OF ARCHITECTURE

PROBABLY no architectural subject has been made so frequently the theme for illustrated treatises as the Greek and Roman Orders.

Heavy tomes, embellished with copper-plate engravings setting forth the relation of their parts with varying degrees of unanimity and exactness, have been showered upon us for generations — even centuries. And small wonder: for these same orders were destined to become in due course the accepted models for the architectural systems of the whole of Europe and America.

It is because of our imposed familiarity with classic forms and ornament that none of us troubles to consider the incongruity of making our banks and our town halls exact counterparts, externally at all events, of the public buildings of the ancient Greeks and Romans.

Only the curious and the thoughtful reflect upon the dramatic fact that in turn every country in Europe abandoned its own national and indigenous style of architecture, and adopted in its stead the temple architecture of these pre-Christian civilizations.

Such sustained domination is without parallel in the history of architecture, and while we may speculate with regret upon the loss to art which the total extinction of so many national styles unquestionably brought about, we must pay full tribute to the extraordinary adaptability and stupendous vitality of the foreign systems of architectural composition that usurped them.

This mighty achievement has, in effect, produced a universal art which is practised today—with slight but characteristic modifications—by all the nations of Europe.

The foregoing observations have been prompted by the recent publication of *The Orders of Architecture* by Mr. Arthur Stratton. This is a most ambitious work and contains a great number of plates and text illustrations.

It is necessary, however, to say a few words upon what the reviewer regards as the scant justice which has been meted out to Mr. Trystan Edwards, who, although credited on the title-page with having merely contributed the introduction, is nevertheless virtually the author of the book, at any rate so far as the letterpress is concerned.

Now an introduction is invariably signed and usually precedes the author's text of the work itself, and one naturally expected to find Mr. Trystan Edwards's name at the end of such a preliminary statement. But the writer sought it in vain, as will others.

It was during the search that a small-type inset—gummed to the preface—was observed. This had the appearance of an "errata" slip, but was found to consist of a definition of the term "Introduction," as laid down by the publishers. Here it is admitted—in very obscure and reticent language—that Mr. Trystan Edwards is responsible for every one of the five chapters contained in the book. The unavoidable inference is that the attribution in question was an eleventh-hour addition to the work on the eve of its publication.

Inasmuch as a further scrutiny of this belated announcement reveals the fact that Mr. Stratton's contribution to the book comprises brief notes on the module, inter-columniation and other subsidiary matters, and the annotated lists of his own plates, one feels that Mr. Trystan Edwards should at the very least have been designated as joint author.

As regards the volume itself, Mr. Trystan Edwards's most scholarly disquisition upon various aspects of the Greek, Roman, and Italian Orders will be found of the highest value to all sincere students of architecture. In addition there are over eighty well-drawn plates, for the most part especially prepared for this work under Mr. Stratton's supervision, as well as a glossary and an index.

FREDERICK CHATTERTON

The Orders of Architecture. By Arthur Stratton. With an introduction by A. Trystan Edwards. London: B. T. Batsford, Ltd. Price 21s. net.

JAPANESE ARCHITECTURE

UNTIL Whistler demonstrated to Western eyes the beauty of Japanese prints, the pictorial arts of Japan had been strangely neglected. Even less was known of her architecture, Fergusson's *History of Indian and Eastern Architecture*, published in 1876, remaining the standard textbook up to nearly the end of the nineteenth century.

In 1898 Mr. Cram was invited to go to Japan to design a new Parliament House, and although the project never materialized, the charming perspective drawing in this book makes one regret the circumstances that caused the abandonment of the scheme. Most of these essays were published originally in 1905. Much has happened in the East since then, and if the revisions of the present edition had been more drastic, the book would have been of greater value, for a good history of Japanese architecture is badly needed. Unfortunately, a Ruskin-ridden outlook on modern artistic tendencies, coupled with a rhetorical style which leads the author to make such wild statements as "Sir Christopher Wren was an engineer of defective ability, with a flair for architecture of the theoretical sort," irritates rather than amuses, for Mr. Cram, when not straining after effect, can write very well indeed. At times the author contradicts himself. On page 94 he states that the beautiful Torii monuments were creations of Buddhism, but on page 111 he blames the Shinto priests for putting up a clumsy Torii at Horenji, which in Buddhist times had been without one. Again, one is left in doubt of his opinion on the Tokugawa temples, for in one place he calls them "trivialities," and in another "great architecture."

Except for such blemishes the chapters on the history of Japanese architecture give a clear historical account of the mingling streams of Korean and Chinese influences, which produced the most perfect style of timber architecture in the world.

The speed with which the Japanese assimilate new ideas was already characteristic in the seventh century. In 607 the Korean artists built the monastery of Horiuji, and in 680 the pagoda of Yakushiji marks the birth of a purely national style, free from the heavy severity of the Chinese prototype, and already full of the grace which was to characterize the art through the Fujiwara and Kamakura epochs, right up to the seventeenth century.

The disciples of Professor Strzygowski will challenge the author's assumption that the Japanese forms are classic, modified in their eastward passage from Athens through Persia and India. If one compares the crossed rafter ends of such a building as the Shinto temple on plate xvii with the gable ends of the Norwegian churches of Borgund and Gol, the theory of the author of *Orient oder Rom*, that there was a northern stream of communications, seems the more probable.

Mr. Cram believes that the best Japanese art is "unspotted by modernism," but some of the illustrations show strikingly modern forms. Many of the domestic interiors might be the work of some of our most advanced European modernists. These designs combine richness of gold and lacquer and precious woods with an austere refinement. The chapter on domestic interiors is, perhaps, the most valuable in the book, and illustrates the fact that once again the jaded West has turned for fresh inspiration to the ever-fecund East.

LL. E. W.

Impressions of Japanese Architecture and the Allied Arts. By Ralph Adams Cram. London: George G. Harrap & Co., Ltd. Price 12s. 6d. net.

THE SPECIFICATION WRITER

Cement Concrete Specifications

The following notes are condensed from the report prepared by the consultative board of the Manchester architects and builders on the specification of cement concrete. The full report[1] includes actual specifications suggested for use in bills of quantities.

THE use of concrete for building and constructional work is rapidly increasing, and owing to scientific research it is possible to specify concrete precisely and to replace some of the existing methods which are based on rule-of-thumb.

Concrete is used for two distinct and separate purposes, viz. :

1 : Mass concrete (with a safe compressive strength of 12–15 tons per sq. ft.) for large foundations, engine foundations, etc.

2 : Reinforced concrete (with a safe compressive strength of 35–50 tons per sq. ft.) for specially designed foundations, floors, monolithic frame construction, etc.

There are six principal factors in its production—cement, small aggregate, large aggregate, water, workmanship and curing. Owing to modern methods of manufacture, cement presents no difficulty, but the question of proper aggregates, correct proportions of water, workmanship and curing is of the utmost importance. The water: cement ratio, which is almost universally ignored in this country, can be controlled quite simply for practical purposes on the site by proper measurement of water and the use of the slump test.

CEMENT

There are three classes of cement : ordinary Portland, rapid - hardening Portland, and aluminous, the last of which is not dealt with here.

The characteristics of Portland and rapid-hardening Portland are similar, the chief difference being that rapid-hardening is made with such refinement in manufacture as to produce a much superior quality.

For the specification of cement, it is quite sufficient to stipulate that " cement must conform in every respect with the British Engineering Standard Association's Specification for the time being in force," stating whether normal Portland or rapid-hardening is required.

Cement Tests. The testing of cement is a matter for experts, but there is still room for some common-sense testing. A frequent difficulty is failure to harden in a reasonable time, and the responsibility for this can be determined by a few simple tests within the capabilities of any builder's foreman. To test the setting properties of the cement, about a pound should be mixed with just sufficient water to produce a stiff paste, and by means of a trowel moulded on a piece of iron, slate or glass into a cake or pat about 3 ins. square and 1 in. thick. This pat should be examined from time to time and its progress of setting observed. In eighteen or twenty-four hours the pat should have hardened sufficiently to resist any impression by a thumb-nail; in forty-eight hours it should not be easy to break the pat in the fingers. This rough-and-ready test will only be of value if the cement be mixed with the minimum proportion of water, and if the pat be preserved under cover in a moderately warm shed. If the temperature falls below 50 degs. F. the hardening will be retarded.

If it is proved in this way that the setting of the cement is satisfactory, the next step is to test the effect of the sand and other aggregate in the concrete. It is better to test each individual material separately. One pound of the cement should be mixed with about 2 lb. of the sand to be tested, and then water added to produce a stiff paste, which should be moulded into a cube-shaped block on a non-porous plate, and the sides smoothed with a trowel. This block should be kept under the conditions described for neat cement testing, and should harden at somewhat the same rate. A third test can be made with cement, sand and some of the coarse aggregate. When the cement, aggregate, and water have been proved satisfactory by tests and the concrete work in practice does not harden well, the conclusion must be drawn that the latter experience is the result of severe weather or defective mixing. The effect of the atmospheric conditions can be observed by making duplicate sets of pats and blocks, keeping one set under cover in a warm room and the other set in the open and subjected to the same conditions as the concrete in the work.

The neat cement pat can be used as a test for soundness or freedom from expansion by boiling in water for a few hours after it has hardened in the air. The boiled pat should not soften or crack. The " bottle test " and others similar are fallacious and out of date, as no regard is paid to varying rates of expansion for glass and cement. If tests are required a provisional sum should be included in the quantities to cover the cost.

AGGREGATES

Fine aggregate should consist of sand, stone screenings, or other inert materials with similar characteristics, or a combination thereof, passing a $\frac{3}{16}$-in. sieve, having clean, hard, strong, durable, uncoated grains, free from injurious amounts of dust, lumps, soft or flaky particles. A sharp sand is not necessary as it requires more water to give workability and may therefore produce a weaker concrete.

Coarse aggregate should consist of crushed stone, gravel, or other inert materials with similar characteristics or a combination thereof, having clean, hard, durable, strong, uncoated pieces free from injurious amounts of soft, friable, thin, elongated or laminated pieces, alkali, organic or other deleterious matter. Brick aggregate is suitable for use in mass concrete, etc., but not for reinforced concrete unless it is obtained from the brick kiln. To obtain first-class concrete, clean aggregates are essential; dirty aggregates are those containing loam, clay, old mortar and plaster, organic matter and refuse. If the aggregates are not clean, the cement adheres to the coating of lime or clay and prevents adhesion to the aggregate. A sharp aggregate needs more water to reach a given workability than a round one and may produce a weaker concrete.

Artificial aggregates, such as broken brick, clinker, etc., should be free from coal or partly-consumed coal and be chemically inert, otherwise there is a risk of the concrete expanding after it has set. Coke breeze is largely used as a concrete aggregate, with satisfactory results where no great strength is demanded, but here again it is essential that the breeze should contain no coal. Breeze or clinker should not under any circumstances be used in reinforced concrete work, chiefly because of the possibility of moisture percolating through and rusting the steel and also on account of deleterious chemical action.

WATER

Water must be free from earthy vegetable or organic matter, acids and alkaline substances in solution or suspension. Wherever possible, water should be obtained from towns' drinking supply to avoid risks of pollution. The water : cement ratio determines the ultimate strength of the concrete more than any other factor. There is a natural tendency to use a sloppy mixture because it is easier to mix and place in position, but it is established that after the essential condition of workability is secured, the concrete is weakened in proportion to the excess water added. It is possible to use too little water, which would produce porous concrete. In practice, however, there is little tendency in this direction. At present it appears that the most practicable method for arriving at a correct water measurement is by means of the " slump test."

[1] Obtainable from J. Denver, 2 Conyngham Rd., Victoria Pk., Manchester : 1s.

Slump Test.—This is effected by the use of a sheet-metal truncated cone-shaped mould, 12 ins. high, 8 ins. diameter at the base, 4 ins. diameter at the top, and a $\frac{5}{8}$-in. bullet-nosed metal rod 2 ft. long.

The usual method is as follows :

1 : Place metal mould on concrete or other smooth non-absorbent surface (mould to be held firmly down).

2 : Fill mould with concrete to a depth of 4 ins.

3 : Puddle the concrete with bullet-nosed rod. Exactly twenty-five strokes to be given.

4 : Fill mould another 4 ins. deep and puddle this 4 ins., as before (twenty-five strokes).

5 : Fill mould to top, strike off level, puddle top 4 ins., as before (twenty-five strokes).

6 : Hold mould in position for three minutes.

7 : Carefully remove mould *vertically* and place it on a clean surface as near concrete contents as possible.

8 : Measure difference in height between mould and concrete heap.

9 : This difference is the slump.

After the amount of slump has been fixed on the site for various portions of the work, the foreman should see that the amount of water is constant for each portion of the work.

A slump test should be taken wherever concreting is started for the day, and if the slump is not within the prescribed limits, more or less water must be used until the correct slump is obtained. The measurement of the water is easily arrived at with the use of modern concrete mixers.

The following slumps are recommended for different types of concrete :

Mass concrete	2–3 ins.
Reinforced concrete :	
Heavy sections	3–4 „
Thin vertical sections and columns	5–6 „
Thin confined horizontal sections	7–9 „

WORKMANSHIP

Except for small jobs, hand-mixing is not desirable. In general, the only satisfactory method is by means of a concrete-mixing machine, operated for a period sufficient to mix the concrete after placing all the materials and the water in the drum. For reinforced work, concrete requires to be well worked or rodded when deposited, to prevent air-pockets and cavities, and to ensure adhesion of the concrete to the reinforcement. Concrete should be in its final position before setting commences so as to prevent delay in the hardening and consequent injury. Concrete should not be mixed in larger quantities than can be used before setting takes place, especially in hot weather.

Construction Joints.—Trouble with concrete as regards permeability usually occurs at construction or day-to-day joints. In placing, segregation, forming stone pockets at the bottom of the layer, should not be permitted; any laitance rising to the top must be removed, and the surface cleaned and preferably grouted before proceeding with the next layer.

CURING

The best results are obtained when the concrete hardens in a warm damp atmosphere. At a temperature below 40° F. the rate of hardening is slow. If the concrete is exposed to a hot dry atmosphere when hardening, there is a danger of the water evaporating, thereby causing rapid contraction, and tending to produce contraction cracks. A wrong view is sometimes held that concrete hardens by drying out, whereas it actually improves if kept moist during the first two or three weeks. It is as important to protect concrete from heat and drying winds as it is to protect it from the action of frost, and this can only be done by constant wetting. This is of the utmost importance.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council :

The Work of the Session : The memoranda prepared by the President on the future policy of the Institute and the work of the session were considered and discussed.

The Title of the Journal : On the recommendation of the Literature Standing Committee it was decided to discontinue the use of the obsolete title " The Architectural Journal " as the heading to the advertisement pages of the *R.I.B.A. Journal.*

The Fellowship : The Council, by a unanimous vote, elected the following architects to the Fellowship, under the powers defined in the Supplemental Charter of 1925 : Messrs. Eric Trewern (Queensland) and W. J. Walker Todd (Edinburgh).

Election of Students : The following Probationers were elected as Students of the R.I.B.A. :

Birmingham School of Architecture

Baker, H. G.	Dickinson, C. (Miss)
Grice, K. J.	Robson, W. C.
Hickton, E. H.	Rowledge, D. H.
Ledoyen, A.	Smeeton, R. H.
Redgrave, C. F.	While, G. H.

Liverpool Architectural Association

Abraham, J. G.	Holden, G. T.
Baxter, J. R.	Miles, E. G. R.
Brown, J. H.	

Leicester College of Arts and Crafts

Bent, E. L.	Prince, W. H.

Special Exemption

Cook, W. K.	Maung, M.
Gasson, A. S.	Taylor, A. R.

Also : Hansfor, E. E. [Miss] (*University of Manchester*) ; James, M. J. [Miss] (*Edinburgh College of Art*) ; Maunder, F. A. C. (*Armstrong College, Newcastle*) ; Saurin, C. P. (*University of London*) ; Taylor, A. R. (*R. W. A., Bristol*) ; Wadke, B. P. (*Bombay School of Architecture*).

Mr. Frank M. Elgood, C.B.E., F.R.I.B.A., who presided at the opening session of the National Housing and Town Planning Conference reported on this page.

NATIONAL HOUSING AND TOWN PLANNING CONFERENCE

A three days' conference of the National Housing and Town Planning Council was held at Blackpool, from November 27 to 30.

Mr. Frank M. Elgood, C.B.E., F.R.I.B.A., who presided at the opening session on November 27, devoted to the consideration of " Town and Country Planning Policy," said it was becoming increasingly recognized that town planning was a business proposition, and that it would pay to direct development on the right lines. It was also recognized that haphazard development involved waste, confusion, and delay, and ought no longer to be tolerated. Such ill-regulated and ill-considered use of land in towns led to residential buildings being placed on sites required in the near future for industries, and on the other hand to the indiscriminate placing of industrial buildings on other sites to the detriment of residential and social amenities, thus creating physical, moral, and financial ills for the whole community.

The rapidly increasing encouragement of all kinds of building in rural areas was a menace to a priceless possession of the nation, and to our country scenery, unequalled in its charm and beauty. Were we to go on disregarding

this spoliation or were we to try and arrest it? It could only be arrested by town planning, and an enormous responsibility rested, therefore, on our local authorities to exercise the powers they already possessed and to press for an extension of them. It was a delusion to think that town planning involved a vast expenditure. What should be borne in mind was what the ratepayers were going to lose in the absence of such schemes.

Dr. Raymond Unwin, P.R.I.B.A., said over 300,000 new workers had gone into London in five years, and between the 1921 and 1931 censuses over 1,000,000 new persons had had to be accommodated in the outer parts of London. Outside the L.C.C. area there had been no planning, no co-ordination for these persons, and authorities had been required to spend vast sums for drainage and water supply, and it would be just as sensible to have the shop doors opening on to the main line of a railway. He asked the conference to give the council their full support in pressing for the new Town and Country Planning Bill.

On Saturday, November 28, the housing situation in England and Wales was raised during the morning session in a memorandum by Mr. J. G. Martin, who said during the past year further progress had been made with working-class dwellings, and the grand total of houses of all classes completed between January 1, 1919, and September 30, 1931, exceeded 1,693,000. Notwithstanding this, it was indisputable that there was still a serious shortage of modern dwellings at rents within the means of the lower-paid wage-earners. Only the fringe of the slum problem had been touched.

Since the abolition of the subsidy under the 1923 Act the rate of building by unassisted private enterprise had considerably increased. The chief need was for the steady construction of houses of the three-bedroomed non-parlour type. Overcrowding was generally greater in the smaller than in the larger houses.

Mr. H. H. Humphries, in a paper dealing with housing standards and costs, said whatever method of re-housing was adopted in central areas it was evident that, if the replanning of such areas was to be undertaken on proper lines, it would be impossible to provide accommodation for anything like the number of people who might be dehoused. Some method of housing people other than in the central areas, or even placing them on suburban housing estates must be found. The only apparent alternative to the provision of either flats or suburban estates was by establishing complete suburban towns, such as were often described as "satellite towns."

LIVERPOOL UNIVERSITY

Mr. F. X. Velarde, A.R.I.B.A., speaking at the Liverpool University on "Present - Day Architecture," on November 25, said we seemed to have arrived at a period of architecture different æsthetically and constructionally from all other styles, though minor aspects remained traditional because their fitness had never been surpassed. The use of steel and reinforced concrete was a fundamental change in building construction: the use of brick and wood was not. Architecture had always relied upon a definite form of construction, æsthetically controlled. The more revolutionary the type of construction (as, for example, the Gothic) the greater the difference in external expression. It should follow that the new type of construction would produce a new architecture.

Roughly, modern architecture could be divided into two groups, functional and expressionistic. The functionalists declared that complete architectural beauty was achieved if the designer, having evolved a completely good plan, expressed this through the construction without æsthetic control. The expressionists declared that æsthetic control was essential. Practically all artist - architects favoured the expressionists' theory. History revealed that the number of creative architects was about 5 per cent. of the number engaged in architecture.

The greatest enemies to modern architecture were those untrained, uneducated designers who, realizing the advertisement quality of novelty or strangeness, sought to cull commercial success for themselves and their clients by giving their buildings a profusion of ill-fitting motives taken from every modern building the Continent of Europe had produced.

R.S.A. INDUSTRIAL DESIGNS COMPETITION

That improvement in design was absolutely necessary for the successful marketing of all our goods was stressed by Mr. P. H. Jowett, Principal of the L.C.C. School of Arts and Crafts, when he reviewed the designs submitted in the R.S.A. Competition of Industrial Designs, at the Royal Society of Arts on November 18.

It was regrettable, he said, that only by foreign competition had it been possible to convince many people of the necessity for fine design, which proved how completely we had lost sight of our early traditions. The late Sir Lawrence Weaver once said: "Design in manufacture is one of the things that concerns everybody, but very few realize that it concerns them." This, he thought, was very true, and our present problem was: How were we to make it the concern of all? We could, to some extent, stimulate interest by discussion and criticism, but a stupendous amount of hard work was necessary before we could hope for any definite results.

The schools must do their utmost towards the efficient training of designers, by co-operation with industry on as wide a basis as possible, and the manufacturers must be prepared to make full use of the material produced by that training. He was convinced that we had in this country as much ability, originality and invention in creative design amongst our students, as anywhere in the world, if only we could discover the means of using those qualities. It was pathetic to see the flood of foreign designs and articles, many of them very excellent, used in this country, when we could produce them ourselves if we had the will to do so.

This naturally introduced the question of what was usually called "Modern Art," an unfortunate term, but generally accepted as one that described the movement that had taken place since the beginning of the century. The great wave which had swept over Europe began with painting and architecture, and had influenced all forms of design for decorative and industrial art. The experiments in cubism made so many years ago were the forerunners of much that was designed today, especially in textiles and in interior decoration generally. This was perhaps more evident in France and Germany than it was with us, but most of our younger designers were very familiar with those forms and used them as their natural means of expression. Very often he found that students were told that their work was "too modern," or that "our public would not buy that kind of thing," and yet one knew that there was a definite demand for contemporary ideas in designs. He did not for a moment suggest that all those ideas were good, but he felt very strongly that if we were to make any great advance as an industrial nation we should have to be much more ready to accept, in fact to search for, new ideas in design, and to be prepared to lead and not to follow.

Following is the result of the awards in the architectural section:

Owen Jones bronze medal: George Robb (Manchester Municipal School of Art).

Prize offered by the R.S.A. under the Mulready Trust for a set of three drawings of architectural subjects in any town or district: A prize of £5 each to the following: George McKinlay, William D. Suddaby (Royal College of Art). A prize of £2 10s. each to the following: Harold F. Hoar (Bartlett School of Architecture), and John A. Pinckheard (Northern Polytechnic School of Architecture). Highly commended: George Robb (Manchester Municipal School of Art). Commended: Henry R. Lanchester (L.C.C. Central School of Arts and Crafts), Ernest J. Weir (Edinburgh College of Art).

Prize of £10 offered by the R.S.A. under the John Stock Trust for a design for a bronze wall tablet to

commemorate the loss of the Dirigible R.101 : George Robb (Manchester Municipal School of Art). Commended : Walter F. Martin.

Prizes or travelling scholarship offered by Messrs. Bagues, Ltd., for a design for a decorative ceiling light or laylight in wrought iron and glass for the roof of a palm court adjoining a fashionable restaurant : The judges were unable to recommend that the full amount of the prizes offered should be given, but the following awards were made : £10 to Frank W. McCall; £5 to Ronald F. Reekie (School of Architecture, Leeds College of Art).

Prizes offered by Messrs. Bratt, Colbran & Co. and the Heaped Fire Co., Ltd., for a design for a fireplace : The judges were unable to recommend that the full amount of the prizes offered should be given, but the following award was made : £2 10s. to Miss Elsie Rogers, A.R.I.B.A.

Prizes offered by the General Electric Co., Ltd., for designs of lighting fittings for a lounge in a private house : First prize (fifteen guineas), John A. C. Howard; second prize (ten guineas), Thomas J. Denny. Commended : Arthur Collett (Ryland Memorial School of Art).

Prize offered by Messrs. Hailwood and Ackroyd, Ltd., for a design for a ceiling electric light fitting suitable for a cinema entrance : Ten guineas to Miss Vera Moller.

Prizes offered by Messrs. H. H. Martyn & Co., Ltd., for designs for suite rooms on a large liner : Owing to the lack of suitable entries, the judges were unable to recommend that the full amount of the prizes offered should be given, but the following awards were made : £3 each to the following : Robert C. Davis (School of Architecture, Leeds College of Art), Miss Amy M. Hargroves, and Francis F. Johnson (School of Architecture, Leeds College of Art).

Prizes offered by the Morris-Singer Co. for designs for the entrance lobby to a bank : First prize (ten guineas), William A. Guttridge (School of Architecture, Leeds College of Art); second prize (five guineas), George Robb (Manchester Municipal School of Art). Commended : Frederick N. Cater (Westminster Technical Institute), and Gilbert J. Pratley (Northern Polytechnic).

UNIVERSITY OF LONDON

The awards for the Bossom and Bossom-Davis medals for the 1930–31 session of the University of London Architectural Atelier have been made as follows :

Bossom-Davis medal : Mr. D. A. Stewart (Design for a Fish Market). Highly commended : W. M. Goode-Smith (also for Fish Market).

Bossom medal : Mr. G. Q. Lay (Design for Flats). Highly commended : Mr. E. F. Starling (Design for Chapel).

THE ELORN-PLOUGASTEL BRIDGE

Mr. T. J. Gueritte, B.Sc., at a meeting held under the auspices of the Gloucester Engineering Society, at the Gloucester Technical College, demonstrated by still and moving pictures the methods and principles formulated and adopted for the construction of the largest ferro-concrete arched bridge in the world, at Elorn-Plougastel in Brittany. The arch has a clear span of 567 ft., and a rise of 115 ft., equal to 19 per cent. of span.

The theoretical law that proved elasticity and cohesion to be in direct proportion to the specific weights of common structural materials had oftentimes been overlooked in practice, but the appended table showed that the believed structural superiority of steel did not depend upon cohesion, but rather on its mode of deformation, which might be caused by reversible stresses setting up plastic changes, whereas other materials were too brittle in character to withstand reversible stresses.

Materials.	Young's Modulus.	Specific Weight.	Quotient.
Steel	28 to 30 × 10^6	7·8	3·4 × 10^6
Glass, and silicates ..	8·5 11·4 × 10^6	2·5 to 2·75	3·4 × 10^6
Cellulose, dry wood ..	1·3 1·7 × 10^6	0·3 to 0·5	3·4 × 10^6
Limestone, very compact ..	8·5 × 10^6	2·5	3·4 × 10^6

Taking full advantage of the above law, it was found, by introducing steel in concrete according to a definite plane and system, that the brittle constituents did not fail, and the elastic steel was also supported; the result being that stresses which would break down either material tested independently, were carried successfully. In addition, it was found that the steel was protected from its common form of failure through corrosion.

COMPETITIONS OPEN

December 31.—Sending-in day. Latest date for conditions : September 31. Proposed New Town Hall and Municipal Buildings, for the Walthamstow Corporation. Assessor : H. Austen Hall, F.R.I.B.A. Premiums : £500, £300, £200 and £100. Conditions, etc., obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor : C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor : Robert Atkinson, F.R.I.B.A. Premiums : 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors : Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium : £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost to be less than £1,000) for the Incorporated Association of Architects and Surveyors. Premiums : 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

Owing to the heavy pressure on our space, the "Questions that Arise" section has been held over from this issue.—ED., A.J.

THE ARCHITECTS' DIARY

WEDNESDAY, DECEMBER 9

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of photographs and drawings of Russia's new buildings. Until December 18.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Roads and Road Transport." By Sir Henry Maybury, G.B.E. **8.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Borromini." By Lord Gerald Wellesley, F.R.I.B.A. **6 p.m.**

MANCHESTER SOCIETY OF ARCHITECTS. "The Furnishing of Buildings." By Edward Maufe, F.R.I.B.A. **6.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C. "The Louvre and the Tuileries, Paris." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

BRITISH WOOD PRESERVING ASSOCIATION. At the Auctioneers' and Estate Agents' Institute, 29 Lincoln's Inn Fields, W.C.2. "Wood Structure." By Dr. I. Chalk. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. At Manchester. "Considerations on Foundation Problems associated with Pile Driving." By A. Hiley. **6.45 p.m.**

ARCHITECTURE CLUB. Dinner, to be held at the Savoy Hotel, W.C. **7.30 p.m.**

SOCIETY OF WOOD ENGRAVERS. At the Redfern Gallery, Arcade House, 27 Old Bond Street, W.1. Twelfth Annual Exhibition. Until January 2. 10 a.m. to 6 p.m. (Saturdays, 10 a.m. to 1 p.m.). **10 a.m.**

LONDON HOUSING SOCIETIES. At the Central Hall, Westminster, S.W.1. Housing Exhibition. Until December 10.

THURSDAY, DECEMBER 10

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Architectural Lighting." By R. Waldo Maitland, A.R.I.B.A. **7 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Softwoods." By Alexander Howard. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Ulster Parliament Buildings, Stormont, Belfast." By W. J. Stewart, M.P. **6.30 p.m.**

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION. At the Town Hall, Oxford. Exhibition of member's work in architecture. 2.30 p.m. Formal Opening by the Mayor of Oxford. 4.45 p.m. "Commercial Buildings and Advertisements." Speakers : Alderman W. Hyde, J.P., and Frank Gray. **2.30 p.m.**

FRIDAY, DECEMBER 11

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "Some Economies and Advantages that have resulted from Town Planning." By F. Marsden, M.T.P.I. **6 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "National Characteristics." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

FACULTY OF ARCHITECTS AND SURVEYORS. Annual Dinner, to be held at the Hotel Metropole, Northumberland Avenue, W.C.2. 6.45 for 7.15 p.m. **7.15 p.m.**

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION. At the Town Hall, Oxford. "Town and Country Planning." Speakers : Lord Phillimore, M.C., and A. Francis. **4.45 p.m.**

LONDON SOCIETY. Visit to King's College Hospital, Denmark Hill, S.E.5. **2.30 p.m.**

ILLUMINATING ENGINEERING SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Presidential Address by Sir Francis Goodenough, C.B.E. **7 p.m.**

SATURDAY, DECEMBER 12

Sunrise, 7.57 a.m. Sunset, 3.50 p.m.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION. At the Town Hall, Oxford. "Houses and Housing." Speakers : C. S. Kimpton, A.R.I.B.A., and Mrs. Roberts. **4.45 p.m.**

LONDON SOCIETY. Visit to the Admiralty Building, Whitehall, S.W.1. **2.30 p.m.**

MONDAY, DECEMBER 14

R.I.B.A., 9 Conduit Street, W.1. "Stained Glass in relation to Architecture." By F. C. Eden, M.A., F.R.I.B.A. **8 p.m.**

TUESDAY, DECEMBER 15

UNIVERSITY OF LONDON EXTENSION LECTURES. At the Victoria and Albert Museum, South Kensington, S.W. Last of six lectures on "French Art." By Miss M. Chamot. **3 p.m.**

WEDNESDAY, DECEMBER 16

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Churches and Later Palaces of France." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

CHARTERED SURVEYORS INSTITUTION. Annual dinner of the quantity surveyor members, to be held at the Hotel Victoria, Northumberland Avenue, W.C.2. **7.30 p.m.**

FRIDAY, DECEMBER 18

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. "The Portent of Concrete." By Sir E. Owen Williams, K.B.E. **5 p.m.**

LAW REPORT

FARMHOUSE DILAPIDATION DISPUTE

Bennett v. *Harrow. Official Referee's Court. High Court of Justice. Before Sir William Hansell, K.C.*

THIS was an action by Mr. Henry Edward Bennett, of Ditton Court, Aylesford, near Maidstone, against Mr. Thomas Harrow, of Addlestead Farm, East Peckham, Paddock Wood, claiming the sum of £334 as damages for breach of covenant to repair Ditton Court, which the defendant occupied until September, 1930.

The case for the plaintiff was that in 1926 he bought the estate from the defendant, but allowed him to remain in occupation of the house till July, 1930, on condition that he kept it in repair.

Defendant pleaded that the tenancy was wrongfully terminated in September, 1930, when the plaintiff ejected the defendant's workmen and prevented them from repairing the premises. While denying liability, defendant paid £60 into court as sufficient to cover the claim.

Mr. Van den Berg, K.C., and Mr. W. Boileau appeared for the plaintiff, and Mr. Lynton Thorpe represented the defendant.

Mr. Van den Berg stated that the plaintiff purchased the estate from the defendant in 1926, giving him £28,000. It comprised a residence, with a farmhouse and 344 acres of land. Plaintiff resold several lots, but retained the residence, which he allowed the defendant to occupy rent free, pending the finding of another tenant, on condition that he kept it in repair. Defendant gave up the keys, and since he got possession plaintiff had spent over £200 in putting the place in proper order, and had not finished yet. After the keys were given up, the defendant sent men to the house, but the plaintiff refused to allow them to be there. The real question in regard to the dilapidations was whether Ditton Court was a residence or a mere farmhouse, and whether anything turned on its being let on a quarterly tenancy.

The plaintiff gave evidence and said the residence was like a large villa, with eight bedrooms. Even when he ordered the defendant's workmen out of the house they burst in again and continued to work there. The structural state of the place when the defendant left was very bad, and water came through the roof in several places. The outbuildings were dilapidated and the gardens were not well kept. The defendant seemed to regard himself more as a caretaker than a tenant.

Mr. John H. Day, chartered surveyor, of Maidstone, gave evidence as to the work necessary to be done.

Defendant gave evidence. He said he did not give up the key when he left in July as he thought he might return and see that it was left in good condition. He had then received no notice to quit.

Mr. B. A. Champion, valuer and surveyor, of Dartford and Maidstone, estimated that the amount of work to be done, treating the place as a farmhouse, would cost only £47 18s. He had rarely seen a farmhouse in such good condition.

Mr. E. H. Lambert, surveyor and valuer, of Paddock Wood, gave similar evidence.

The Official Referee thought the plaintiff had claimed too much and that the defendant had paid into court too little. He awarded the plaintiff £173 10s., and gave judgment for the plaintiff for that amount, with costs.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Maternity Home, Radcliffe Infirmary, Oxford (pages 763–766). General contractors, Benfield and Laxley. Sub-contractors : Veronese Co., artificial stone gateway and dressings and Snowcrete rendering; Kingsmill Art Metal Co., wrought-iron gateway; Tilehurst Potteries (1922), Ltd., bricks and roofing tiles; Crittalls Manufacturing Co., Ltd., and William Pye, metal windows; Constone, Ltd., Terrazzo ; Waygood-Otis, Ltd., lifts ; Leeds Fireclay Co., Ltd., and Dent and Hellyer, Ltd., sanitary fittings; Falkirk Iron Co., heating and hot water; Ruberoid Co., Ltd., flat roof; James Slater & Co., Ltd., sterilizing and kitchen appliances; Lowe and Oliver, electrical work; Troughton and Young, Ltd., fanlight; Chas. Smith and Sons, door furniture; Adrian Stokes, Ltd., iron balustrading and staff staircase; Korkoid Co., rubber flooring; Goodwork, Ltd., cellulose painting in interior.

St. Margaret's House, 19–23 Wells Street, W.1 (pages 771–773). General contractors, Bovis, Ltd., who were also responsible for the foundations and joinery. Sub-contractors : Ragusa Asphalte Paving Co., Ltd., asphalt; W. L. Jackson & Co., bricks; Redpath, Brown & Co., Ltd., structural steel; Fredk. Braby & Co., Ltd., copper roofing; Goldstein & Co., glazing; Kleine Company, Ltd., fireproof floors; The Adamite Co., Ltd., "Colemanoid" waterproofing materials; William Edgar and Sons, heating and ventilating; W. J. Furse & Co. (London), Ltd., electric wiring; Matthew Hall & Co., Ltd., plumbing; Leeds Fireclay Co., Ltd., terra-cotta cornices and sanitary fittings; Carter & Co., Ltd., Terrazzo; Yannedis & Co., ironmongery; Charles Smith & Co., casements and window furniture; Potter Rax Gate Co., balustrade and lift enclosure; Mather and Platt, Ltd., sprinklers, rolling shutters and fireproof doors; Carron & Co., metalwork; Anselm Odling & Co., Ltd., marble; Rusts Vitreous Tile Co. and Leeds Fireclay Co., Ltd., tiling; Morris Singer Co., shop fittings; Waygood-Otis, Ltd., lifts; Haywards, Ltd., pavement lights.

"The Gardeners' Arms," 268 Merton Road, Southfields, S.W.18 (page 775). General contractors, A. Roberts & Co., Ltd., who were also responsible for the excavation, foundations and joinery. Quantity surveyor, H. H. Connybeare, F.F.A.S. Sub-contractors : The General Asphalte Co., Ltd., dampcourses and asphalt; Fawcett Construction Co., Ltd., structural steel and fireproof construction; Ames and Finnis, roofing tiles; Building and Insulating Material Co., Ltd., Bimol hollow partition blocks; J. Chater and Sons, Ltd., glass; Acme Flooring and Paving Co., Ltd., wood-block flooring; George Wright (London), Ltd., stoves, grates and mantels; W. and H. W. Gould, boilers; McKone and Haynes, electric wiring and bells; B. Finch & Co., Ltd., plumbing and sanitary fittings; Nettlefold and Sons, Ltd., door and window furniture; Telling, Ltd., plaster; Carter & Co. (London), Ltd., external and internal tiling; Gaskell and Chambers (London), Ltd., counter beer engines and pewtering and cabinet; Educational Supply Association, Ltd., folding partitions; Geo. Johnson, Ltd., lifts; Nash and Hull, Ltd., letters on fascia.

TRADE NOTES

At the annual general meeting of the British Steelwork Association, Mr. J. H. Humphryes (of Braithwaite & Co., Engineers, Ltd.), was elected President for the year 1931–32, and Mr. Ben Walmsley, C.B.E. (of Dorman, Long & Co., Ltd.), was elected vice-president.

*

Messrs. James Clark and Son, Ltd., of Scoresby Street, Blackfriars Road, S.E.1, have recently issued a booklet explaining the many purposes for which the firm's glass may be used, together with numerous illustrations of buildings in which it has been incorporated. It is interesting to note that the glass letters on the tower of the Oxo Warehouse, Bankside, were glazed by Messrs. Clark and Son, Ltd., and they were also responsible for the glazing work on Royal London House, claimed to be the loftiest commercial building in the City.

*

While preparing tropical gums, which are extensively used in varnish manufacture at the Stratford Works of Messrs. Jenson and Nicholson, Ltd., recently, a number of tropical insects of many colours, including large spiders and ants, were found embedded in the solidified gum. It is thought that the specimens were caught in the gum flow as it oozed from the trees, and were overwhelmed before they could escape.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed by the BRENTFORD AND CHISWICK U.D.C.: Alterations, White Building, Barley Mow Passage, for Alliance Assurance Co., Ltd.; two houses, Sutton Court Road, for Kinnaird Park Estate Co.; alterations, 140 High Street, for Mr. C. Barrett; alterations, 301 High Road, for Mr. W. Beven; factory, corner of Great West and Boston Roads, for Mr. F. E. Simpkins; two houses, Boston Gardens, for Mr. A. L. T. Taylor.

The CROYDON Corporation is seeking sanction for a loan of £20,000 for fire station extensions.

The Middlesex C.C. has prepared a modified scheme for extensions at Redhill Hospital, EDGWARE, at a cost of £50,000.

Plans passed by the FINCHLEY U.D.C.: Alterations and additions, Assembly Works, Woodside Lane, for Messrs. Fraser and Glass; house, Edge Hill Avenue, for Mr. P. Preston; house, Blandford Close, for Mr. H. Lawrence; house, Gurney Drive, for Mr. A. Reast; two flats, Seymour Road, for Messrs. G. Payne & Co.; refreshment and dressing rooms, Hampstead Garden Suburb, for Widdenham Athletic Club; additions to gymnasium, Convent, East End Road, for Mother Superior; tennis pavilion, Creighton Avenue, for Mr. E. N. Nansick; ten shops and two houses, Holders Hill Road, for Messrs. Baldwin & Co. (Finchley), Ltd.; two houses, Britannia Road, for Mr. W. S. Cook.

The HENDON R.D.C. is to erect twenty-six houses on the Glebe estate, Great Stanmore.

Mr. Cutler has commenced the development of a building estate near Cannon Lane, PINNER.

The POPLAR B.C. is to proceed with the erection of forty-eight flats, two cottages and twenty shops, on the East Ferry Road site, at an estimated cost of £36,700.

The POPLAR B.C. is to erect thirteen tenements at Millwall and nine tenements at Bow for rehousing tenants displaced by the Benworth Street clearance scheme.

The Middlesex Education Committee is to acquire a site in Mutton Lane, SOUTH MIMMS, for the erection of a secondary school.

The L.C.C. has arranged for the clearance of further property in the Prusom Street area of STEPNEY.

The Bagley and Cherry Orchard Estates, Ltd., is developing the Station Road estate, WEST DRAYTON.

SOUTHERN COUNTIES

The BEXHILL Corporation has passed plans or the development of the Pebsham, Hurchington, Pages and Highwoods estates.

Plans passed by the BEXHILL Corporation: House, De la Warr Road, for Mr. E. Bunce; four houses, St. George's Road, for Mr. J. E. Alce; three houses, Cambridge Road, for Mr. J. H. Lye; house, Westville Road, for Messrs. Tubbs and Messer; bungalow, Chestnut Walk, for Messrs. Jeffery and Bowcock; flats, Fairmount Road, for Mr. J. E. Maynard.

The Russell's Gravesend Brewery Co., Ltd., is preparing plans for the erection of a public-house on the King's Farm estate, GRAVESEND, at a cost of £15,000.

SOUTH-WESTERN COUNTIES

The FALMOUTH Corporation is to erect thirty-four houses on the Penwerris estate.

Mr. Arthur J. Pictor has prepared plans for the erection of a senior school at FROME, for the managers of St. John's Church of England schools.

Mr. G. W. Hands is to erect an ice skating rink and car park in Babbacombe Road, TORQUAY.

Plans passed by the TORQUAY Corporation: Layout of Upton Leigh estate, Teignmouth Road, for Mr. E. Green; house, Lawes Bridge, for Mr. W. F. Gilley; house, St. Katherine's estate, Newton Road, for Mr. W. Murch; two houses, Chatto Road, for Mr. J. H. Tearle; four houses, Reeves Road, for Chelston Building Co.; shops, etc., Barton and Hele Roads, for Torquay Co-operative Society, Ltd.; four houses, Marldon Road, for Mr. J. Lightfoot; bungalow, Lower Audley Road, for Messrs. H. Kershaw & Co.; house, Moor Lane, for Mr. H. J. Scoles; cinema, Castle Circus, for Associated British Cinemas, Ltd.; Bungalow, Teignmouth Road, for Mr. J. E. Knapman.

MIDLAND COUNTIES

The COVENTRY Corporation is to proceed with clearance schemes and erect 100 houses for displaced tenants at the Stoke Aldermoor estate, at a cost of £28,269.

The DUDLEY Corporation has approved plans for the erection of ten houses on the Cradley Road estate.

Plans passed by the DUDLEY Corporation: Two houses, St. James's Road, for Mr. W. Whittingham; four houses, Cradley Road, for Mr. E. Roberts; six cottages, Saltwells Road, for the Wolverhampton and Dudley Breweries, Ltd.; workshop, King Street, for Messrs. A. Preedy and Sons, Ltd.; model piggeries, Harts Hill, for Mr. J. Morgan; bungalow, St. James's Road, for Mr. H. G. Freeman.

The LEICESTER Education Committee is to acquire a site in Anstey Avenue for the erection of an elementary school.

The LEICESTER Corporation is to proceed with a section of the slum-clearance scheme in the Abbey Street area.

Mr. J. Reece is to erect shops in Norman Road, SMETHWICK.

The STOKE-ON-TRENT Education Committee has obtained sanction to borrow £3,000 for the erection of two temporary schools in Oakhill and at Moorland Road.

The STOKE-ON-TRENT Corporation has obtained sanction to borrow £62,000 for extensions at the London Road institution.

The STOKE-ON-TRENT Corporation is negotiating for fifteen acres of land at Tunstall for housing purposes.

Mr. A. W. Moss, architect, is to develop land in Hanley Road, Sneyd Green, STOKE-ON-TRENT.

The TAMWORTH Corporation is to erect 104 houses on a new estate.

NORTHERN COUNTIES

The BIRKENHEAD Corporation has prepared a modified scheme for the erection of a maternity and child welfare clinic.

Mr. H. C. Killinder is to erect a bank at the corner of Grove Road and Old Chester Road, BIRKENHEAD.

The BIRKENHEAD Corporation is to proceed with the erection of 300 houses on the Higher Bebington Estate.

The BIRKENHEAD Corporation has passed plans for alterations and additions to the General Hospital, Park Road North.

The DARTON U.D.C. is to erect thirty-four houses at Staincross and twenty-six at Higham from plans prepared by Mr. J. H. Hinchliff.

The MANCHESTER Corporation is to erect shops on the Victoria estate, Blackley, at a cost of £3,100.

The MANCHESTER Corporation is to erect a number of electricity sub-stations, at a cost of £37,600.

The MANCHESTER Corporation is to proceed with the erection of houses on the Seymour estate, Clayton, by direct labour.

The MANSFIELD Education Committee is to erect a senior school for 400 pupils in the vicinity of Carr Bank.

Plans passed by the MANSFIELD Corporation: Additions, Club, Midworth Street, for Constitutional Club Committee; six houses, Sutton Road, for Mr. C. C. Stafford; bungalow, Frank Avenue, for Mr. J. Handby; two houses, Balmoral Drive, for Mr. E. M. Smith; two houses, Rutland Street, for Mrs. A. M. Bramley; two houses, Berry Hill Road, for Mr. H. Baggaley; two houses, Becketts Lane, for Messrs. J. and J. McDonagd.

The MORECAMBE Corporation is considering the purchase of land in Clark Street, for the extension of the fire station.

The MORECAMBE Corporation is to obtain sites for the erection of three sub-stations in connection with the Overton electricity scheme.

Plans passed by the MORECAMBE Corporation: Four houses, Lamplough Street, for Mr. A. Hargreaves; shop, Lancaster Road, for Lancaster Co-operative Society; additions, 18 Euston Road, for Messrs. Drivers; house, Thornton Road, for Mr. J. H. Carleton; two houses, Westgate, for Mr. A. Pickles; house, Hest Bank Road, for Mr. H. Baxter; two bungalows, Willacy Parade, for Mr. F. Obank; shop, Lancaster Road, for Messrs. Edmondson Bros.; two houses, Broadway, for Messrs. Bell and Isaacs; two houses, Walton Avenue, for Messrs. Pratt and Eccles.

The PONTEFRACT Corporation is to erect fifty houses on the Brotherton estate from plans prepared by Messrs. Tennant and Smith.

The SALFORD Corporation is to erect electricity sub-stations at Lower and Higher Broughton.

The SEAHAM HARBOUR U.D.C. is to inspect sites suitable for the erection of the proposed bridge near the railway station.

The SEAHAM HARBOUR U.D.C. is to prepare plans for the erection of houses on a new site at Deneside.

The SHEFFIELD Corporation has sold a site on the Shiregreen estate to the Sheffield Congregational Association, for the erection of a church.

The SHEFFIELD Corporation Health Committee has approved the proposed site for the extensions at the city general hospital.

The SHEFFIELD Corporation has obtained sanction to proceed with clearance schemes in several areas.

The SHEFFIELD Corporation has leased land on the Shiregreen estate shopping centre to Messrs. Shentall, Ltd., for the erection of shop premises.

Plans passed by the SHEFFIELD Corporation: Thirty-four houses, Dykes Hall estate, for Corporation Estates Committee; six houses, Harley Road, for Mr. G. M. Taylor; six houses, Glanville Road, for Messrs. A. and E. Tate; sixteen houses, Harley Road, for Mr. S. G. Bailey; four houses, Manchester Road, for Mr. A. Spooner; six houses, Cardoness Road, for Messrs. T. W. L. Mowles and Son; four flats, Sheldon Road, for Messrs. Rawcliffe and Ogden; shop and house, Bellhouse Road, for Miss Turner; ten houses and two shops, Athol Road, for Mr. S. Bannister; 252 houses, Shiregreen estate, for Estates Committee; four houses, Slannington Road, for Mr. A. Simpson; six houses, Cliffe Field Road, for Mr. H. Hammett.

The STOCKTON-ON-TEES Corporation is to proceed with a scheme for the erection of a bus garage.

SCOTLAND

The EDINBURGH Corporation is to erect a further 106 houses on the Niddrie estate, from plans prepared by Mr. J. MacRae, the city architect.

The GLASGOW Corporation is obtaining sites, totalling fifty-three acres of land, at Temple and Over Possil, for housing schemes.

Messrs. Gillespie, Kidd and Coia are to erect premises for the Roman Catholic Archdiocese in Whitevale Street, GLASGOW.

The PAISLEY Corporation has prepared plans for the provision of an isolation hospital.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_1	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_3	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A_2	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0¾
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_1	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_3	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull	Mid. Counties	1 5½	1 1¼
A_2	Southampton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Welling-borough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . . per hour		1	8
Carpenter . . . . . ,,		1	8
Joiner . . . . . ,,		1	8
Machinist . . . . . ,,		1	9
Mason (Banker) . . . . . ,,		1	8
,, (Fixer) . . . . . ,,		1	9
Plumber . . . . . ,,		1	8
Painter . . . . . ,,		1	7
Paperhanger . . . . . ,,		1	8
Glazier . . . . . ,,		1	8
Slater . . . . . ,,		1	8
Scaffolder . . . . . ,,		1	4
Timberman . . . . . ,,		1	4
Navvy . . . . . ,,		1	3
General Labourer . . . . . ,,		1	3
Lorryman . . . . . ,,		1	5½
Crane Driver . . . . . ,,		1	7
Watchman . . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . . per ton	2	8	6
Blue Lias Lime . . . . ,,	2	10	6
Hydrated Lime . . . . ,,	2	16	0
Portland Cement . . . . ,,	2	6	0
Rapid Hardening Cement . . . ,,	2	13	6
Thames Ballast . . . . per Y.C.		8	3
¾" Crushed Ballast . . . ,,		9	6
Building Sand . . . . ,,		10	0
Washed Sand . . . . ,,		11	6
2" Broken Brick . . . ,,		9	6
¾" ,, ,, . . . ,,		12	6
Pan Breeze . . . . ,,		6	6
Coke Breeze . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8		—
Channel junctions . . ,,	7	0	12	6
Channel tapers . . . ,,	5	6	7	9
Yard gullies . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6		—
Gaskin . . . ,,		5		—

BRICKLAYER

	£	s.	d.
Flettons . . . . . per M.	3	1	6
Grooved do. . . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R at Nine Elms :	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . ,,	2	11
York stone . . . . ,,	6	9
,, Sawn templates . . ,,	7	6
,, Paving, 2" . . . . F.S.	1	8
,, ,, 3" . . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) . per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station :			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each			9½
,, hand-made . . . ,,			10
Nails, compo . . . lb.			4
,, copper . . . ,,		2	0

CARPENTER AND JOINER

	£	s	d.
Good carcassing timber . . . F.C.		2	6
Birch . . . . as 1" F.S.			9
Deal, Joiner's . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1		3
,, African . . ,, ,,	1		1
,, Cuban . . ,, ,,	2		6
Oak, plain American . . ,, ,,	1		0
,, Figured ,, . . ,, ,,	1		3
,, Plain Japanese . . ,, ,,	1		2
,, Figured ,, . . ,, ,,	1		5
,, Austrian wainscot . . ,, ,,	1		6
,, English ,, . . ,, ,,	1		11
Pine, Yellow . . . ,, ,,	1		0
,, Oregon . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,	1		3
,, Burma . . . ,, ,,	1		2
Walnut, American . . . ,, ,,	2		3
,, French . . . ,, ,,	2		3
Whitewood, American . . ,, ,,	1		1
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 1¾" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, 1" . . . ,,		17	6
,, 1¼" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1¼" . . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	. 50
Water . . . 58½	,, water	. 45
Steam . . . 55	,, steam	. 40

FITTINGS.

Per cent.		Per cent.
Gas . . . 57½	Galvanized gas	. 47½
Water . . . 52½	,, water	. 42½
Steam . . . 47½	,, steam	. 37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ¼" . . ,,	10	0
,, ,, ⅜" . . ,,	9	9
,, ,, ½" . . ,,	9	6
,, ,, ⅝" . . ,,	9	0
,, ,, ¾" . . ,,	9	0
,, ,, 1" . . ,,	9	0
,, ,, 1¼" . . ,,	9	0
,, ,, 1½" . . ,,	9	0

	3" s.	d.	4" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.		7		10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . ,,		—	6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets. ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.		5		6
Stop ends . . . . each		6		7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	21	6
,, drawn pipes . . . ,,	22	0
,, soil pipe . . . ,,	25	0
,, scrap . . . ,,	11	6
Solder, plumbers' . . . lb.		11
,, fine do. . . . ,,	1	3
Copper, sheet . . . ,,	1	0
,, tubes . . . ,,	1	4

L.C.C. soil and waste pipes :	3"		4"		6"	
	s.	d.	s.	d.	s.	d.
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
,, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.	s.	d.
Sheet glass, 21 oz. . . . F.S.				3½
,, ,, 26 oz. . . . ,,				4½
Arctic glass . . . . ,,				5
Cathedral glass . . . ,,				6
Hartley's rough rolled . . ,,				9
Do. wired plate . . . ,,			1	3
¼" Polished plate, n/e 1 ft. ,,			7½ to 1	0
,, ,, 2 . . . ,,			10 ,, 1	3½
,, ,, 3 . . . ,,	1	4½	,, 1	10
,, ,, 4 . . . ,,	1	11	,, 2	4
,, ,, 6 . . . ,,	2	3	,, 2	7½
,, ,, 8 . . . ,,	2	5	,, 3	0½
,, ,, 12 . . . ,,	2	10	,, 3	3½
,, ,, 20 . . . ,,	3	3½	,, 3	9
,, ,, 45 . . . ,,	3	6½	,, 4	0½
,, ,, 65 . . . ,,	3	11½	,, 4	4
,, ,, 90 . . . ,,	4	4	,, 4	9
,, ,, 100 . . . ,,	4	6	,, 4	11
Vita glass, sheet, n/e 1 . . ,,			1	6
,, ,, ,, 2 . . ,,			1	3
,, ,, ,, over 2 . . ,,			1	9
,, ,, plate, n/e 1 ft. . ,,			1	6
,, ,, ,, 2 . . ,,			3	0
,, ,, ,, 5 . . ,,			4	0
,, ,, ,, 7 . . ,,			5	0
,, ,, ,, 15 . . ,,			6	0
,, ,, ,, over 15 . . ,,			7	6
Putty, linseed oil . . . lb				3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		2	4
Boiled oil . . . . ,,		2	8
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
2½ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1½″ do.	,,	3 4 0
1¼″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ½″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	,,	2 0 6
Do. in covering to turrets, etc.	,,	2 7 6
Do. in soakers	,,	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1¼″ s. d. 2 8	2″ s. d. 3 8	4″ s. d. —
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,, ,,	,,	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER

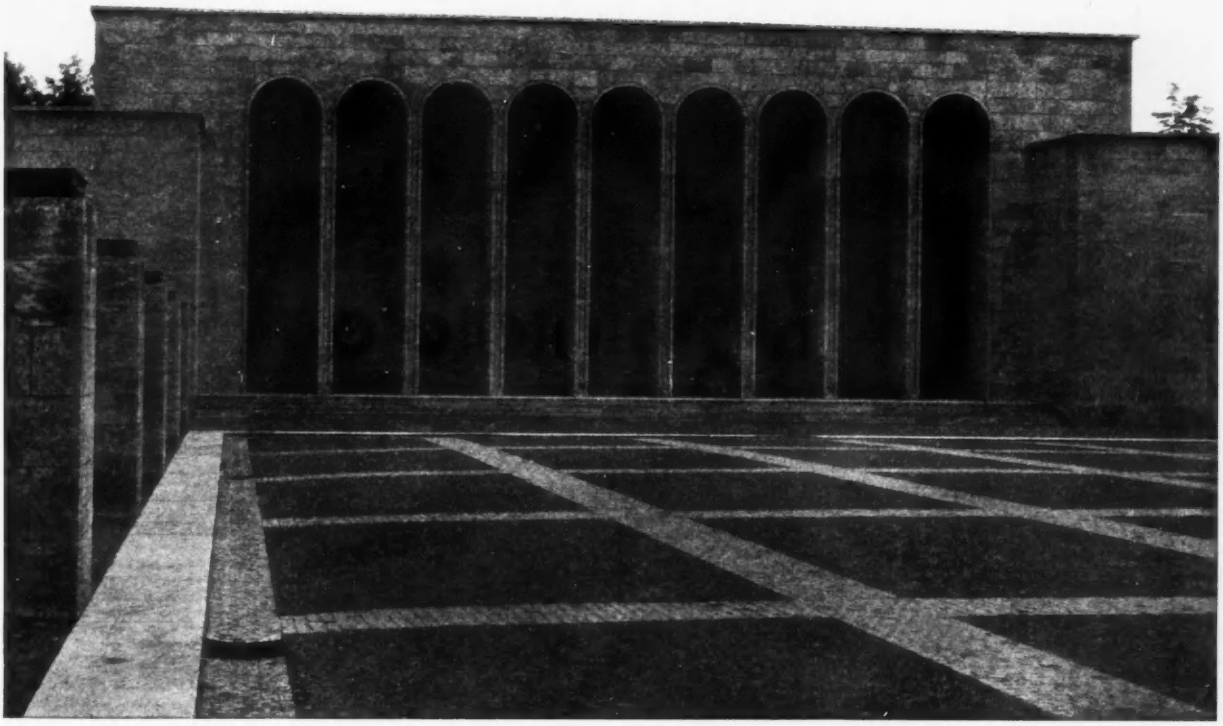
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper	from ,,	2 9

NUREMBERG WAR MEMORIAL

FRITZ MAYER : I. THE GENERAL DESIGN : ARCHITECT

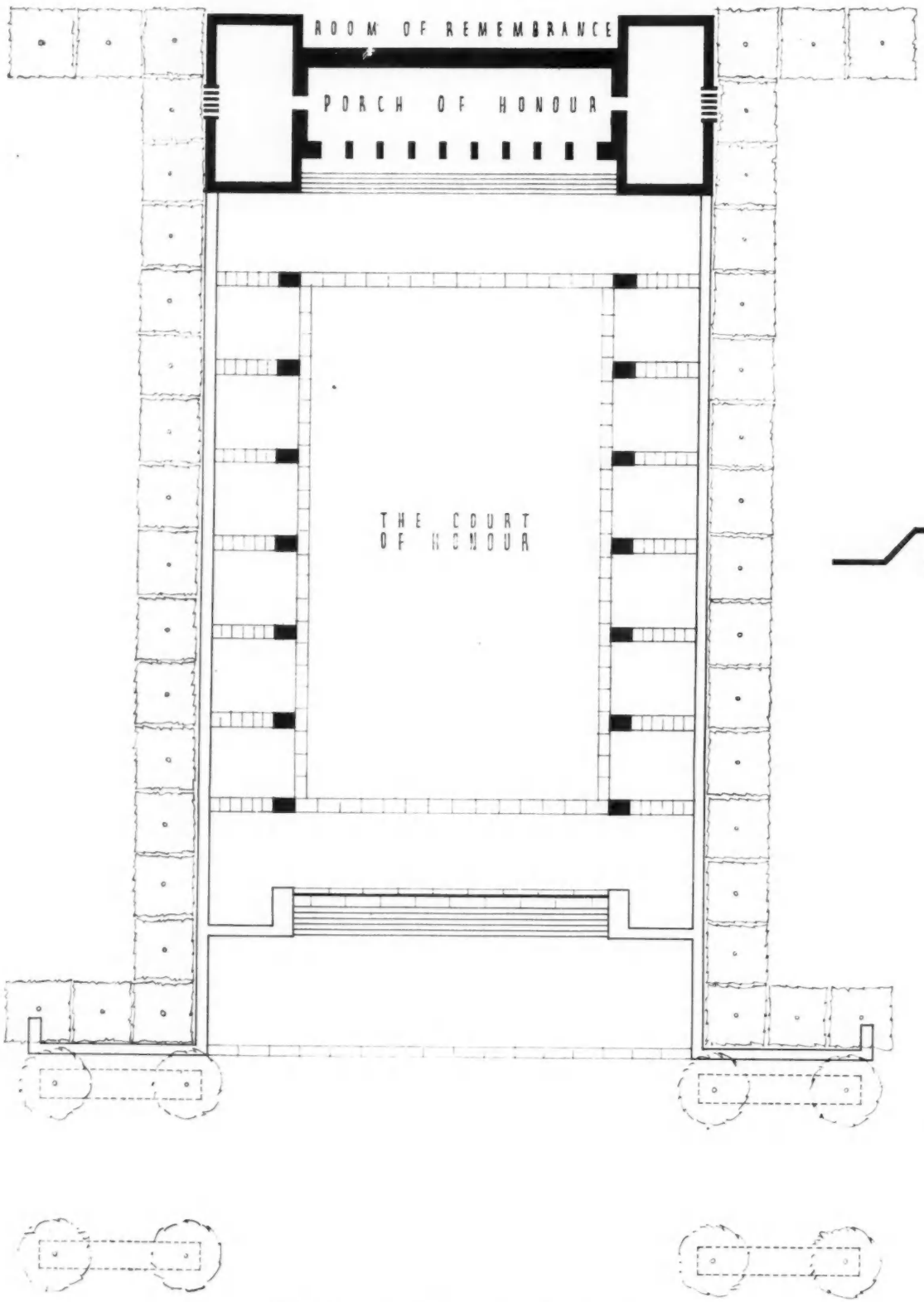


THE HALL OF MEMORY FROM THE FORECOURT

THE most important of the newer German war memorials show a common tendency that essentially distinguishes them from older tradition. Memorials were formerly almost always sculptures. These new shrines of honour are no memorials in this older sense, but are places of remembrance. They are no longer sculpture, but architecture. A symbolical carving, it is true, marks the central point of the design, but it is now the constituent part of an indivisible larger conception. (For example, the symbolic cross in the Berlin memorial, or the inscriptions in that at Nuremberg —in other cases, sarcophagi or figures).

The basis of this new conception is many-sided. The most valid honour to the fallen is that they should be thought of and their memory kept green among the living. So the shrines of honour are so arranged that they form gathering places in a suitable atmosphere of solemnity. One is constrained to have them every day in mind, and to that end there are built either separate rooms (as in Berlin) or a quite independent place (as in Nuremberg and elsewhere). Lastly, this new conception, which gives these high aims not sculptural but essentially architectural expression, is evidence of the dominant position taken by architecture in modern art.

The Nuremberg memorial, of which a general view appears above, with drawings within, shows these aspirations particularly clearly. It is placed at the focal point of the long central axis of one of the public parks. The building itself stands in an outer court, flanked on either side by a row of pylons with censers. The boundary walls are divided by the hall of memory. On its inner wall are the inscriptions, with crosses and flags below them. To either side lie two smaller halls of remembrance. Within an iron case in a niche is kept a book of remembrance, with the names of the dead. There are graphic representations of war incidents on the walls by the Nuremberg artist, Jobst Kuch.

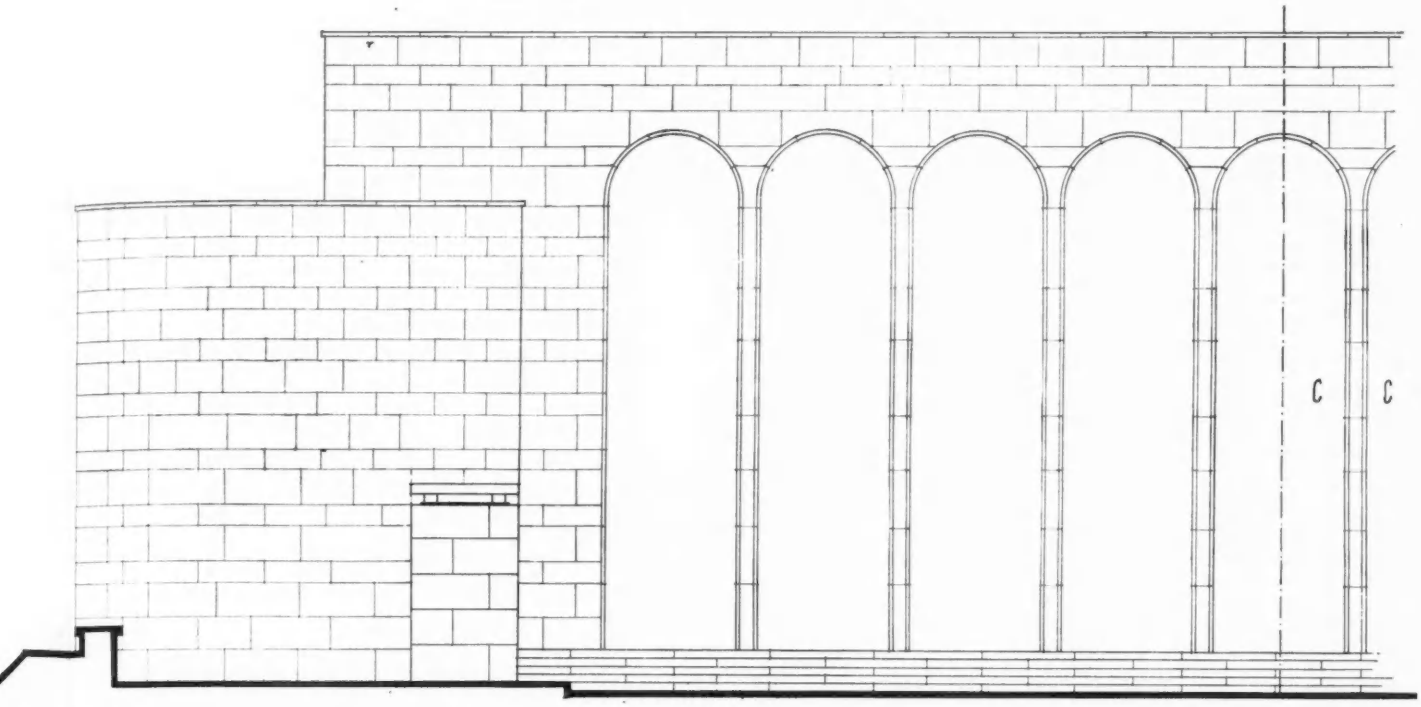


GROUND PLAN

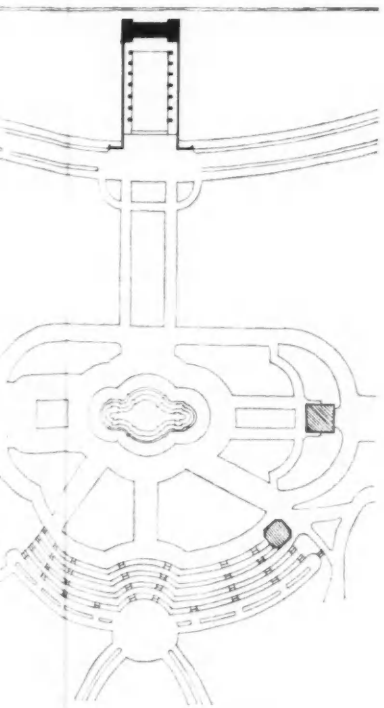
SCALE 32 FEET TO ONE INCH

MEMORIAL FOR THE FALLEN OF THE TOWN OF NUREMBERG SHEET 1

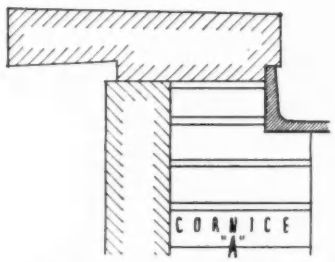
ARCHITECT FRITZ MAYER

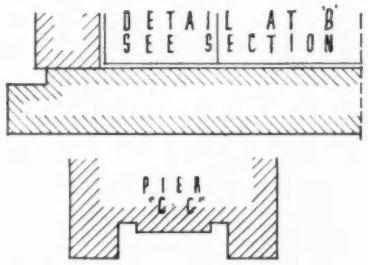


T ELEVATION TO THE COURT OF HONOUR
SCALE EIGHT FEET ONE INCH

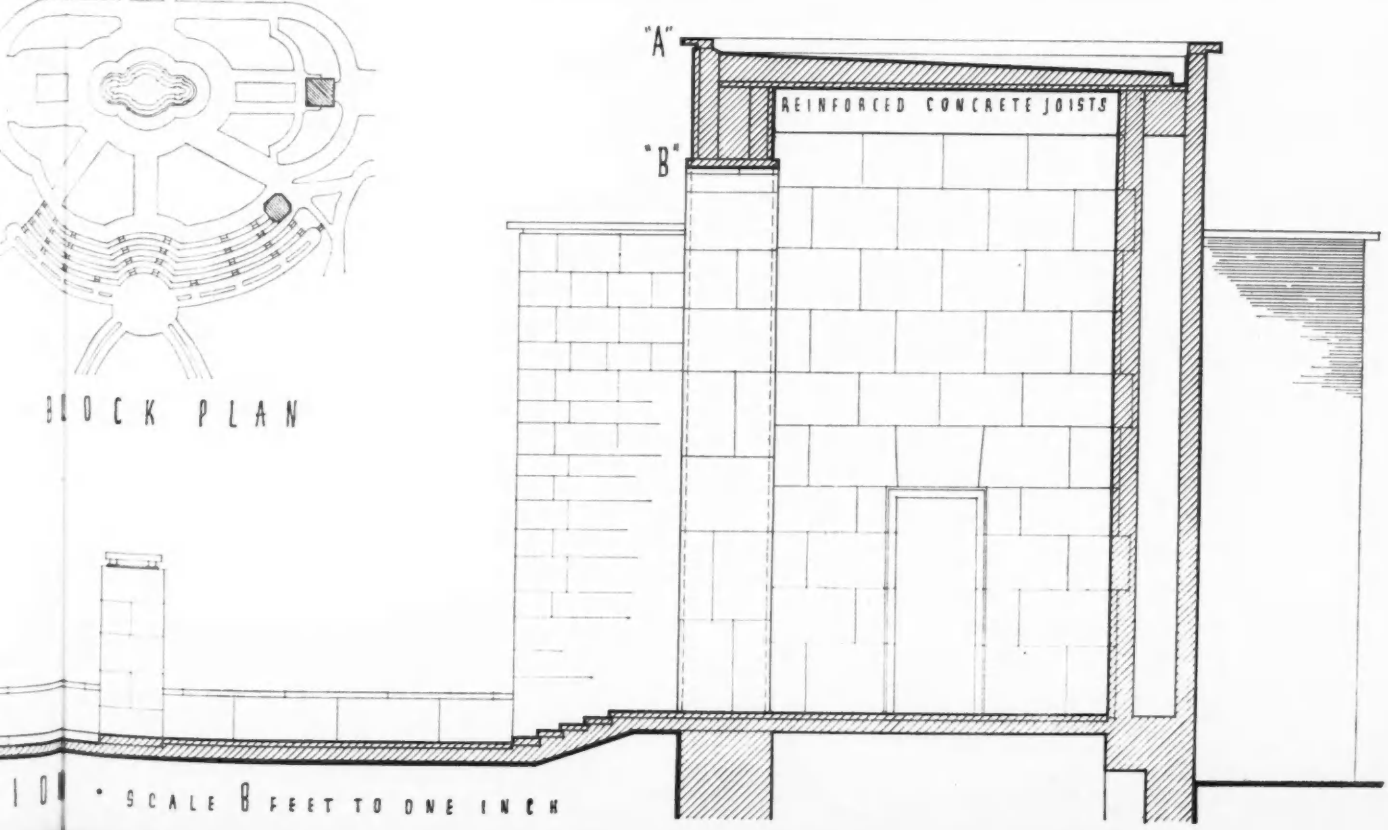


BLOCK PLAN





INCH SCALE· DETAILS CORNICE AND·PIER



I 0 · SCALE 8 FEET TO ONE INCH

HALL CEILING AT CECIL SHARP HOUSE

ANOTHER DETAIL FROM THE ENGLISH FOLK DANCE SOCIETY'S HEADQUARTERS

[H. M. Fletcher and Godfrey Pinkerton, Architects.

THE CEILING OF THE MAIN HALL, SHOWING THE LANTERNS

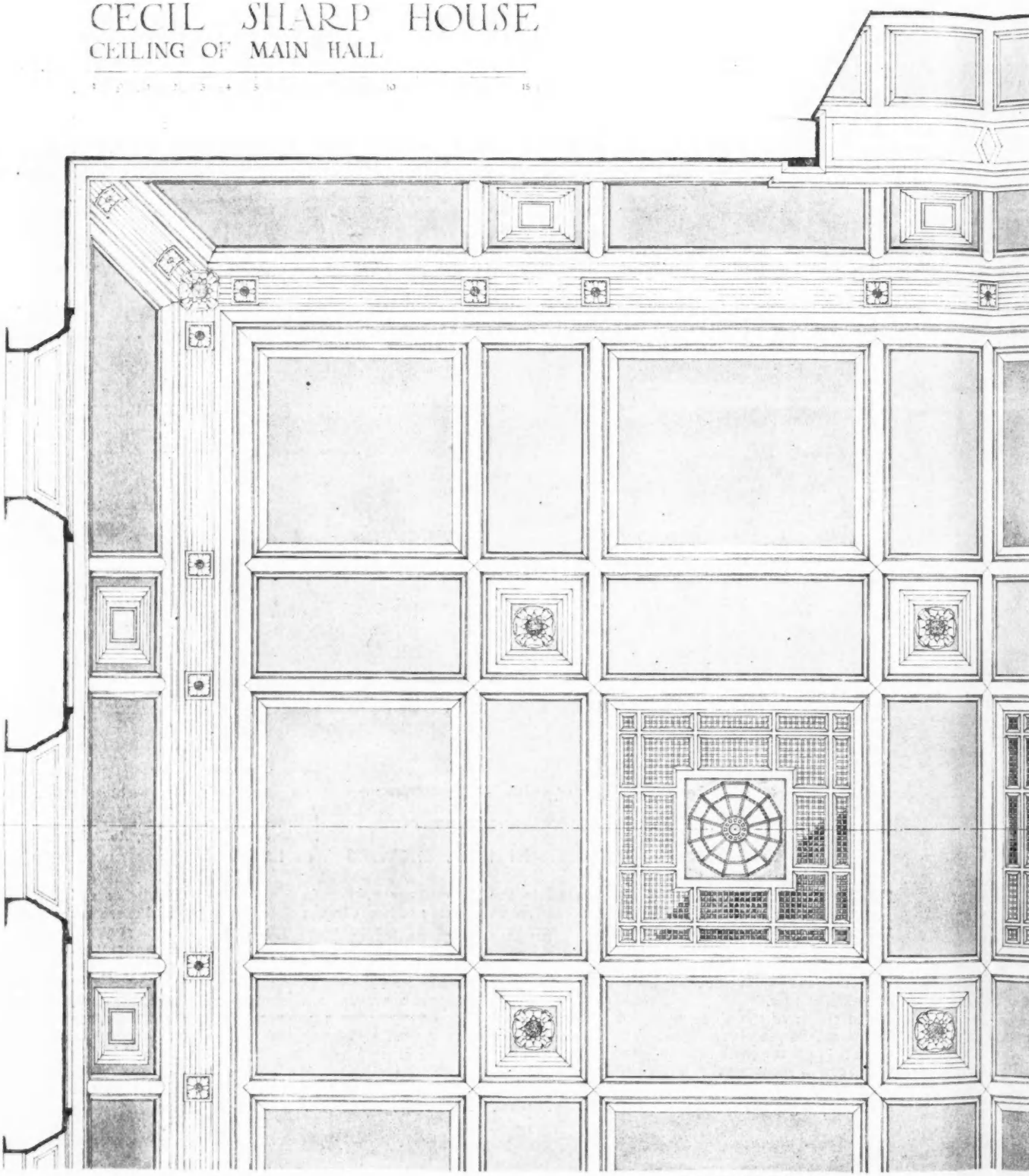
THE ceiling of the main hall is illustrated in the photograph above, and in plan and section on the centre pages. Certain decorative features, such as rosettes, are shown to a larger scale on the back page of this supplement. The colouring is pale biscuit for the panels and white for the ribs, mouldings and enrichments.

The grilles of the three square central panels are for ventilation and acoustics. The whole of the work is in plaster except the long panels in the splays, which are of acoustic felt. Each of the square plaster panels between these has at its centre a square of flashed opal glass, behind which is a light. The hall is entirely lighted from these porthole lights and groups of lamps in the ceiling lanterns, and there are no pendants or wall-lights. By means of grouped switching there is a range of candle-power from darkness to great brilliancy, so that the lighting can be almost imperceptibly adjusted to the particular purpose for which it is required: lectures, concerts, massed folk-dances with hardly any audience, or displays of folk-dancing with full audience.

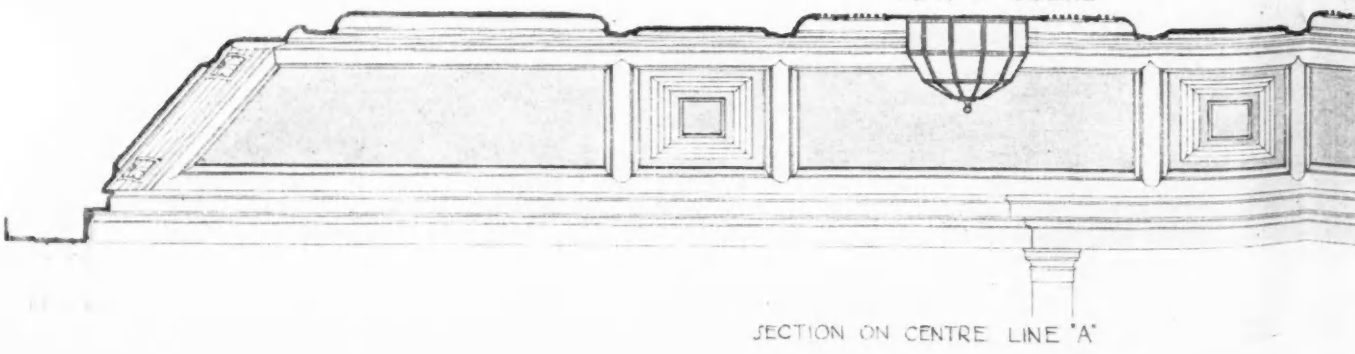
Cecil Sharp House was illustrated and described in the issue for June 4, 1930, and a detail of one of the external stairs was given in a supplement with the issue of August 19 last.

CECIL SHARP HOUSE

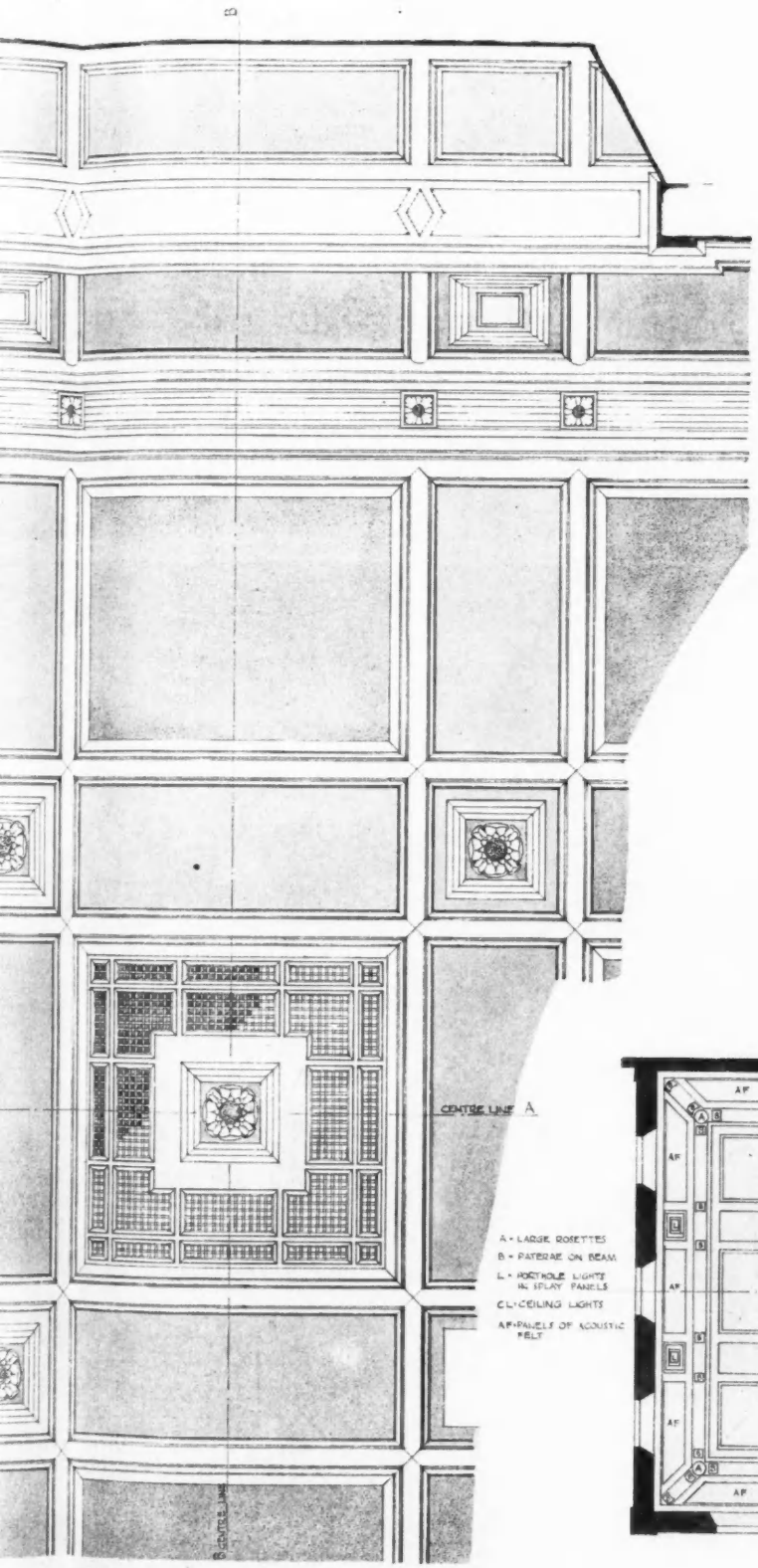
CEILING OF MAIN HALL



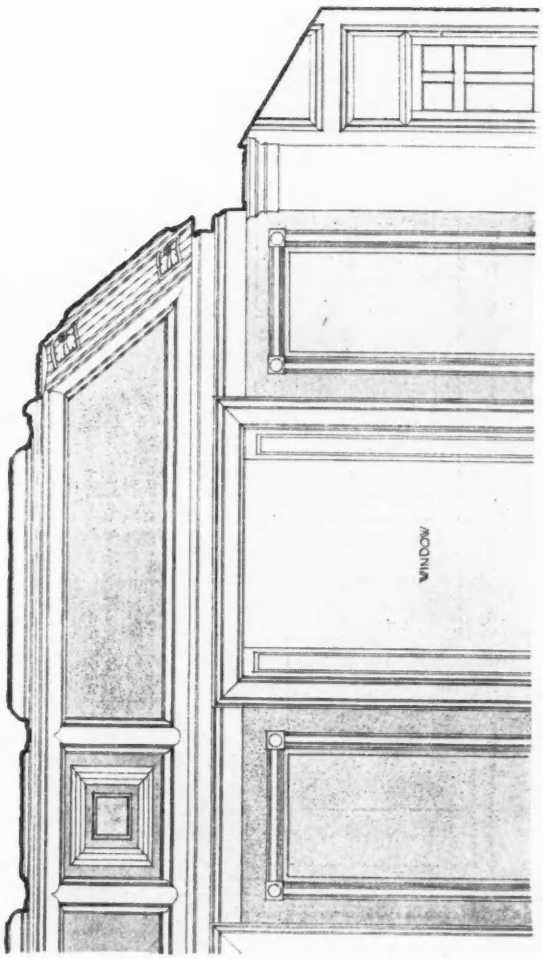
PLAN OF CEILING



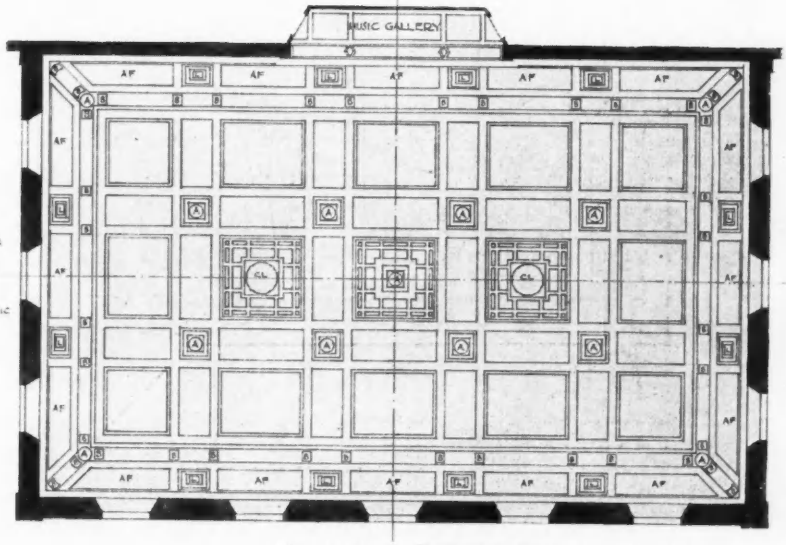
SECTION ON CENTRE LINE "A"



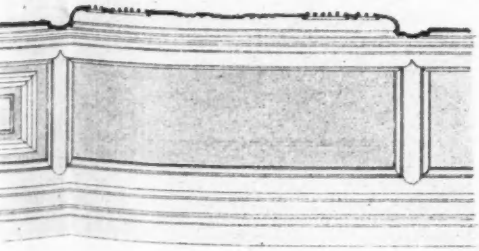
A = LARGE ROSETTES
B = PATERAE ON BEAM
L = POSTHOLE LIGHTS IN SPLAY PANELS
CL = CEILING LIGHTS
AF = PANELS OF ACOUSTIC FELT

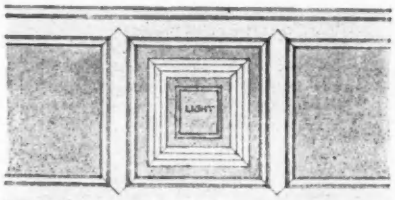


SECTION ON CENTRE LINE "B"



KEY PLAN ~ 1·0 5 10 20 30

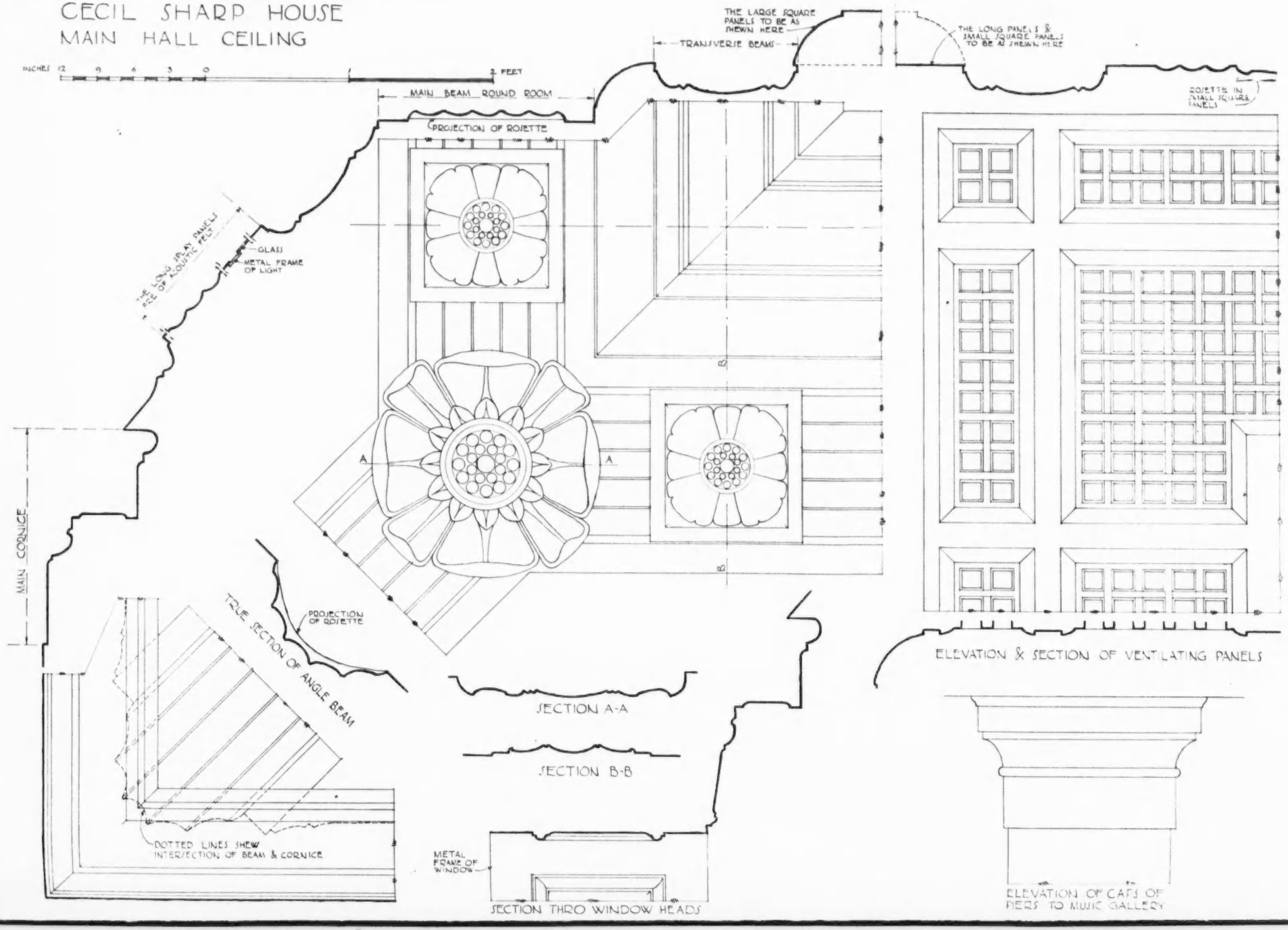




TRUE ELEVATION OF PART OF SPLAY

Supplement to THE ARCHITECTS' JOURNAL for December 9, 1931

CECIL SHARP HOUSE
MAIN HALL CEILING

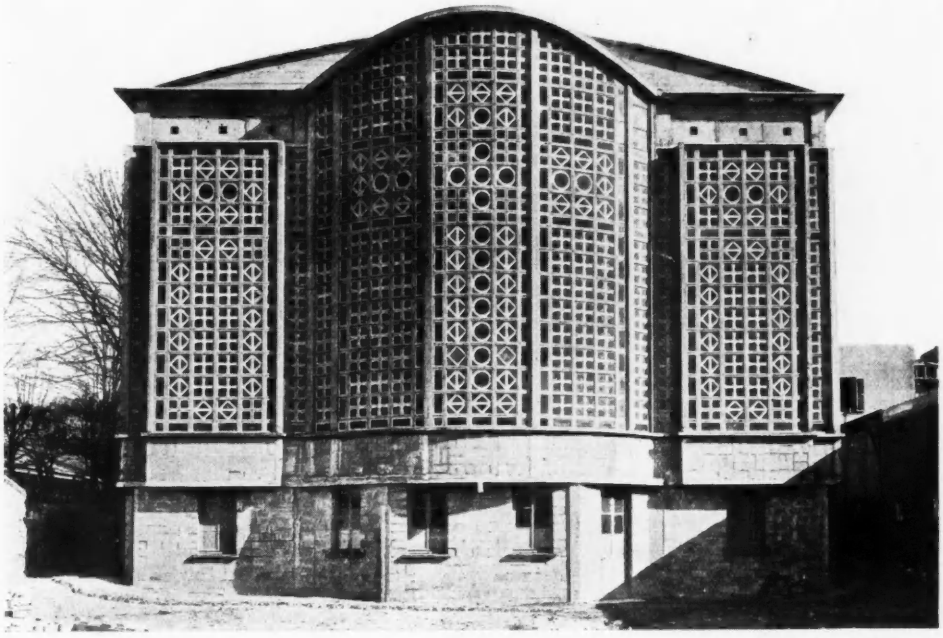


SECTION THRO WINDOW HEADS

ELEVATION OF CAPS OF PIERS TO MUSIC GALLERY

SELECTED PRECEDENTS:

MODERN CHURCH AND CHAPEL EXTERIORS: II



[*A. and G. Perret, Architects.*

1. *APSE OF THE CHURCH OF OUR LADY, LE RAINCY, NEAR PARIS*

THE church would seem to be almost the last type of building which calls for the drastic revaluation of existing structural ends in the light of new structural means that we rather lamely call "Functional Modernism." People in all countries are accustomed to worship in churches built centuries ago. Here, then, is logical justification for buildings that try to soften the abrupt architectural transition between yesterday and today.

Figures 4 *and* 5 *are good, and typically English, examples of such architectural tact. Each, though modern in feeling, preserves a modicum of the familiar traditional detail. Neither attempts to break with the past. Both reassure the passer-by that they are the sort of churches in which there will be nothing to offend the susceptibilities of the aged. Yet, at the same time, both gently indicate that every generation must expect to find that "the old order changeth."*

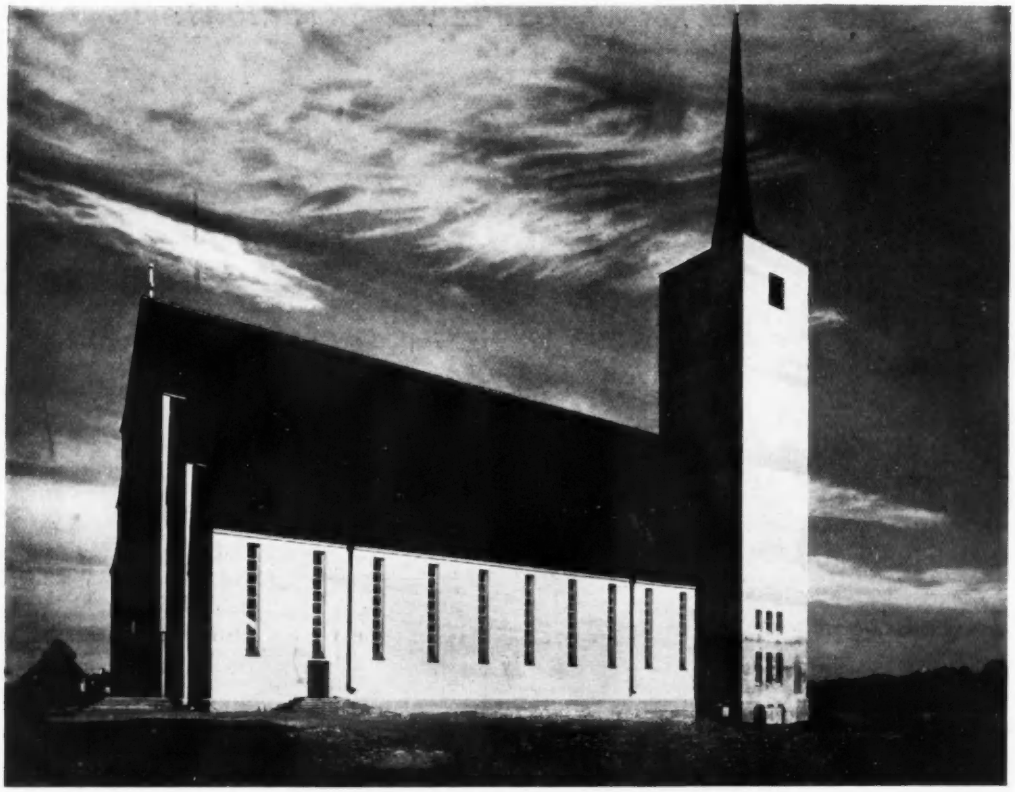
[*Dr. Curt Steinberg, Architect.*

2. *THE LUTHERAN GEORGENKIRCHE, FRANKFURT-AN-ODER*

Figures 2 *and* 3 *are chosen from their German "opposite numbers." The first is Lutheran and brick; the second Catholic and concrete. Both have achieved a sane and dignified simplification of Renaissance and Gothic forms, respectively, without solecism or vulgarity. The effect of the vigorous upward thrust of the spire of the beautiful Frankfurt Church is, however, rather spoilt by the rustic porch at its base. The church at Rosenheim, a whitewashed concrete building, discards the pointed windows which Mr. Edward Maufe has been at some pains to retain at St. Saviour's, Acton.*

Figure 1 *illustrates the curiously fretted apse of the Brothers Perret's famous church at Le Raincy. Here again, though the construction adopted was daring enough to satisfy the most out-and-out Modernist, the form chosen remains purely traditional; and undoubtedly gains in consequence.*

P. MORTON SHAND

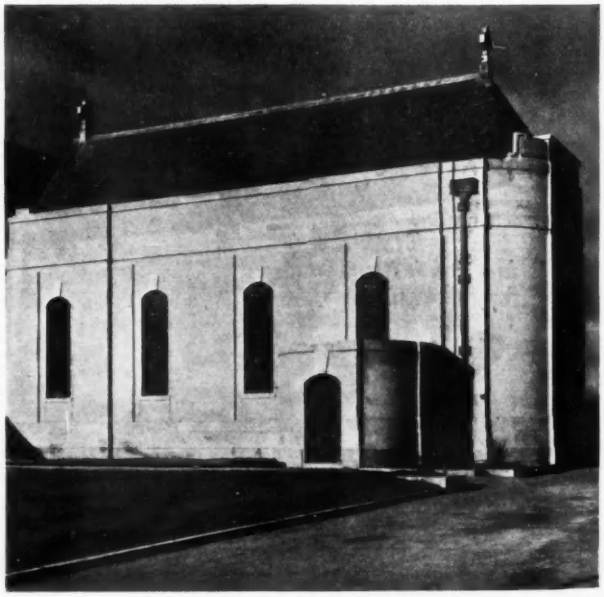


[*By courtesy of Bauunternehmung Dyckerhoff und Widmann, A.-G., Wiesbaden-Biebrich.*

3. *THE CHRISTKÖNIGKIRCHE, ROSENHEIM, GERMANY*

[*Edward Maufe, Architect.*

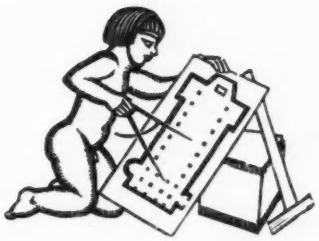
4. *ST. SAVIOUR'S CHURCH, ACTON*



[*Adams, Holden and Pearson, Architects.*

5. *CHAPEL OF THE ROYAL TORBAY HOSPITAL*

THE ARCHITECTS' JOURNAL



WEDNESDAY, DECEMBER 16, 1931

THE CLASSIC ORDER ONCE MORE

SOME people are already prophesying that the next generation of designers will have nothing whatever to do with column and entablature, or at least the particular forms these features assumed in the styles affected by the ancient Greeks and Romans, and by the masters of the Renaissance.

This reaction against the Orders has hitherto made itself felt in the architectural schools and among a group of practitioners in this country who receive their inspiration from the Continental " modernists."

The profession as a whole has not yet yielded to the demands of these iconoclasts, and, indeed, the latter have been known to express a certain amount of chagrin at their failure to wrest the great professional prizes from " the old gang." Of course, there is the scandal of the City of London, where the bankers and other princes of finance obstinately cling to their columns as if these were emblems of respectability as sacred as their top-hats. But far worse is the state of affairs in the world of architectural competitions, where the effete classicists carry all before them with a wearisome monotony.

Let nobody contend that this success on their part is due to a superior skill in the art of planning. The obvious explanation is that " the old gang " are at their tricks again. The " bright young people " in our profession are convinced that there will be no " justice " for them until the present select list of competition assessors is replaced by another list more to their liking. Whether this replacement results from the natural death of the assessors in question, or from their supersession by some human agency, is a matter of indifference to our architectural innovators, provided that it be accomplished without undue delay.

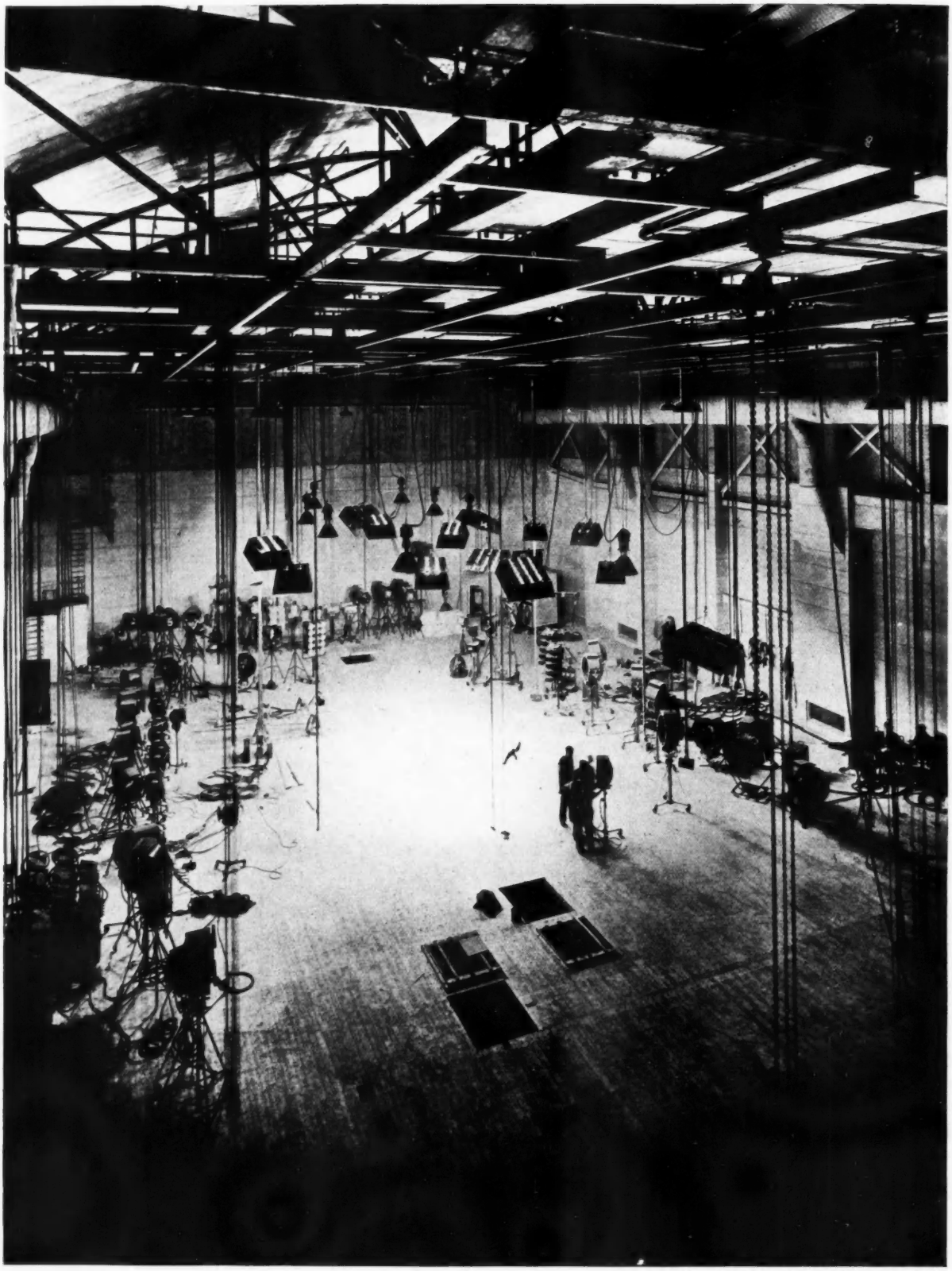
But why this animus ? It is all because " the old gang " have got a strange psychological complex which induces in them a predilection for the Classic Order. As a rule they are too astute to give reasons for this mental aberration; they allow it to be supposed that they go on designing columns because columns are part of the divine nature of things. All the books about the Classic Order were written long ago, and they consist principally of dryasdust statements giving the proportions of the various parts of the Orders in terms of vulgar fractions, and in any case the investigations are couched in such a form that they could be of interest only to archæologists.

It would surely be a bold man who in the twentieth century would write a book about the Classic Order, and a very bold publisher who would publish such a book. This is a case for strategy rather than a frontal attack.

Hence it is not surprising that the beautifully produced volume, entitled *The Orders of Architecture*, reviewed in our last issue, should be distinctly more subtle than its bare title suggests. In the first instance we note that on the jacket of the volume the name of the author is given as Mr. Arthur Stratton, whereas on turning the pages it is discovered that the villain of the piece is Mr. Trystan Edwards, who once more expounds the organic principles of Number, Punctuation and Inflection—all exemplified, according to his witness, in the old Classic Order. In fact, the Preface notwithstanding, the whole of the five chapters in critical commentary of the Classic Order appear to be his work.

Whether the architectural student is convinced by Mr. Edwards's thesis or rejects it, here at least is a book which for the first time seeks to give reasons why we should admire the Classic Order and regard it as a living instrument of design. Yet the choice does not necessarily lie between the total acceptance and the total rejection of the old Classic Orders.

Is it too much to hope that the present generation will evolve new Orders of their own, which will be satisfying to traditionalists and modernists alike ?



[*Messrs. Robert Atkinson, Architects.*

THE FIERCE-LIT CRADLE OF MAKE-BELIEVE

Two generating sets of no less than 600 h.p. each, are provided to supply the intense lighting required in this A.R.P. film studio at Ealing Green, W. There are many features unique as far as this country is concerned. Further illustrations appear on pages 795–8.

NEWS & TOPICS

ARCHITECTURE CLUB DINNER

THE Architecture Club dinner, held last Thursday at the Savoy Hotel, was remarkable for the nearly continuous flow of sense. The subject was air ports, and to show that the Club meant business, it had arranged with Mr. John Drower, the secretary of the R.I.B.A. Aerodromes Committee, to show some of the best examples of air-port architecture upon a screen. There followed a fairly complete exposition of the subject from speakers who approached it from different angles: Colonel F. C. Shelmardine, Director of Civil Aviation; Dr. Unwin; Nigel Norman, Director of Heston Air Park; Colonel the Master of Sempill, the distinguished airman; and G. L. Pepler. I did not like the way most of the laymen talked of architecture. "Architectural" and "practical" seemed to most of them to be totally different things. And they do mean different things to them. And what are architects going to do about it? And what is the Architecture Club for, anyway?

REGISTRATION ACT COMMITTEE

Under the Architects Registration Act, which takes effect with the New Year, the first sitting of the Committee appointed by the Home Secretary to decide upon the representation to be accorded on the Registration Council to the various architectural bodies was due to meet at the Home Office yesterday (Tuesday). The constitution of the Committee is as follows: Clifford A. Aish, Major G. B. J. Athoe, Major Harry Barnes, Harry William Crickmay, S. Phillips Dale, L. A. F. Ireland, W. G. Percy, A.Randall Wells, and F. R. Yerbury.

WESTMINSTER HOUSING EXHIBITION

At the Exhibition by the London Housing Societies at the Central Hall, Westminster, opened by H.R.H. the Duchess of York last week, I found a large assemblage of people showing the most lively interest in the urgent problem of the slums. The whole affair was admirably organized, and very great pains were taken to present the facts of housing, some doleful but others encouraging, in a striking manner. Great credit is due to Mrs. Darcy Braddell for the design and arrangement of the exhibit hall, and to Mrs. Maria Petrie, who painted most of the mural scenes depicting the expressive contrasts between good and bad housing conditions. It is a bright idea to employ the art of the poster in propaganda to abolish the evil of slums.

★

In addition to the attraction of the numerous photographs and models illustrating housing schemes, there were a number of cinema entertainments showing the Under-Forty Club housing film, and the Pioneer town-planning film, while a one-act housing play by Miss Creagh-Henry for the Church Army Housing, Limited, was performed by the Mystical Players. No less than twenty-five different housing societies were here represented, and one's only regret in connection with the exhibition was that it lasted for too short a time. It is, however, gratifying to learn that the "New Homes For Old" Housing Exhibition of the Under-Forty Club is now available for use on loan to any responsible body in provincial towns.

"BUY BRITISH TOMBSTONES"

I see no reason why Mr. Thomas's "Buy British" campaign should not be put to good uses when occasion arises, and if it can help to keep out the flood of beastly pasty-white marble tombstones that, as the Rector of Chislehurst has been saying in his church magazine, do not tone down to proper terms with their surroundings, then let the Church shout "Buy British" with the rest of them. But, as Dr. Hardman, the Rector, very properly points out, "the conversion of the stone-masons to this point of view is, perhaps, the first step; *for people are largely guided by their suggestions.*" The italics are mine. They mark a moral.

ANOTHER BALTIC ISLAND BRIDGE

The note on the bridge across the Little Belt (between the mainland of Jutland and the island of Fünen), which appeared on this page in October, has brought me particulars of another enterprise in the Baltic of a similar kind. A causeway, 2·5 kilometres long, is to be constructed across the Strelasund, the strait dividing the large German island of Rügen from the Prussian mainland. Hitherto 37–45 minutes have been lost on the direct railway route between Berlin and Stockholm via the Sassnitz–Trälleborg train-ferry (which conveys sleeping cars over more than sixty miles of open sea) owing to the existence of another, though much shorter, train ferry between Stralsund and Altefähr. This will be abolished when the new rail and road causeway over the Strelasund is finished in three-and-a-half years' time.

★

The present work is being financed by a 5 per cent. loan of 18,000,000 kronor (about £1,000,000) which the Swedish Government has made the German Reichsbahn in order to find work for Swedish quarrymen. The embankment, which will be 100 metres wide at its base, narrowing to 18 at the top, is to be built of stone ballast, faced with rubble. It will run straight from shore to shore athwart the intervening island of Dänholm. There will be two intermediate bridges, 125 and 500 metres long respectively, provided with opening spans to allow the passage of shipping.

★

In all other respects the Strelasund causeway will be modelled on that recently built between the mainland of Schleswig-Holstein and the North Sea island of Sylt by the German State Railways. It is interesting to recall that the prototype of both these causeways was one constructed a few years ago to connect the railways of the Malay Peninsula with the island on which Singapore is situated. Another has been suggested across the Kyle of Lochalsh to make the Isle of Skye accessible to motorists.

THE ARCHITECTURE OF THE "SHAPE"

One of the many intriguing mysteries of the kitchen is who introduced, and at what period, the castellated shapes of blancmange-moulds that have been familiar to so many generations of incurious cooks and curious children. Is their design contemporary with baronialized and machicolated railway tunnels? Or do they date back to some great eighteenth-century *chef* who aspired to do for "*glaces*" what Vauban had done for glacis? In any case, it seems high time that someone modernized the conventional forms of fortification in which the Architecture of Jelly has been too long condemned to find its loftiest expression. It is clearly an architect's job; and one in which, for once, he would be free to achieve pure form without bothering his head about structural considerations. A jelly is none the worse for being jerry-built.

ASTRAGAL

STAINED GLASS AND ARCHITECTURE

BY F. C. EDEN

I THINK it is sometimes forgotten that the prime function of a window is to admit light. Whatever may be suited to the tropics, where "the worst of your foe is the sun overhead," in this climate the cry must ever be "Light, more light!" So it was throughout the Middle Ages—those ages, not of sentiment, but of common sense. The solemn, gorgeous colouring of the thirteenth century gradually gave place to the delicate, silvery tints of the fifteenth, with its predominance of white glass, while at the same time the window openings grew larger and larger, till the wall became a mere pierced screen for the display of glass. Mason and glass-painter played into one another's hands, so that it might almost seem as if stained glass were the formative element in the evolution of Gothic architecture. Churches in this country need all the daylight possible. Nothing is so depressing as a town church the windows of which have been so obscured by semi-opaque glass that artificial light has to be used at all hours of the day.

It is a curious reflection that the culminating point of an art of which colour would seem to be the very *raison d'être* should be marked by this predominance, or rather triumph, of white. One reason, perhaps, for this gradual development from murk to the full light of day is that stained glass is peculiarly the art of the North, of sunless climes: an art, maybe, of compensation, to redress the balance, to cheat us into cheerfulness. As a French writer says: "If it be dull without, you may be sure of fair weather in church" (M. Proust).

However this may be, if you want to study glass, choose a dull day. Direct sunlight is a hindrance. With sun streaming through them, the windows facing south are too blinding to examine in comfort, while those on the north will receive the light from the wrong side and fade into lifelessness.

Lead Glazing

Lead glazing is not self-supporting. Apart from wind-pressure, a piece measuring a very few feet in area will sag and crack by its own weight. It therefore requires extraneous support. The wide lights of the thirteenth century were fortified by a regular armament of ironwork arranged in circles, lozenges and so forth, to define the shape of the medallions composing the design. With the introduction of stone mullions, whereby the width of the lights was reduced, say, from 6 ft. to 2 ft. or less, the patterned shapes of the earlier irons were simplified to a rectangular grid of standards and saddle-bars. It must not be supposed that these bars hamper the designer: they really prop the artist as much as they do the material, by compelling him to take the sections into which the surface is divided as units of his design, which is thereby forced on to a geometrical basis.

The "Thick" and "Thin" Schools

During the last thirty years or so, English glass painting has produced two new schools, diametrically opposed in methods and ideals. I do not want to describe them as modernist and traditional, because I dislike the terms, and I think they may be better defined by their works than by their aims, because the former can be seen and the latter only guessed at. I shall, therefore, call them the Thick and Thin schools. The one takes as its model English fifteenth-century glass, and aims at lightness of effect produced by abundant use of white glass combined with slight and delicate painting and a restricted palette. The other, the Thick school—if it may be said to have taken any traditional style as its point of departure, for it is really quite styleless—is to some extent based upon the mosaic method of the thirteenth century. It is characterized by colouring sometimes vivid to the verge of vulgarity, sometimes deep to the point of heaviness, a heaviness which is accentuated by the use of wide leads and coarse, if summary, painting: or, alternatively, the flesh only is painted, while the robes and ornament are an agglomeration of fragments, the only drawing being supplied by the shaping and leading of the pieces.

The Craft of the Glazier

It is obvious that the whole art is based on the craft of the glazier, and it is historically true that as the painter pushed his way more and more to the front the glazier was thrust more and more into the background, till the art sank to its lowest ebb in the west window of New College Chapel. Here the best that a great colourist like Sir Joshua Reynolds could do was to emit a sort of bituminous fog, while the leading which it was sought to avoid revenges itself by obtruding a rectangular grille across the murky and peeling pictures.

It is not surprising that such an example of the peril of shirking the limitation imposed by the leads should have driven some designers to the opposite extreme. Insistence on glazing for its own sake, and not merely as a technical necessity and wholesome restraint upon the painter's vagaries, is obvious in the work of the Thick school. Much of the leading, especially of skies and backgrounds, is in roughly parallel lines, the cames are unduly wide, and there is an effort to draw with the leads as far as possible, in addition to using them for their necessary function of connecting pieces of different colours. An unpleasant obtrusiveness is the result, together with that tinge of commonness which ever accompanies exaggeration and departure from the golden mean. It is hardly too much to say that some of the more anarchic developments of this modern school are as eye-splitting as anything that was done by the despised tradesmen of the nineteenth century.

The Thin school arose in reaction against the over-painting, excessive modelling and pictorial tendencies observable in some contemporary work, which it aimed at correcting by reversion to the fair colouring and delicate painting characteristic of the later mediæval work. Much of the glass it has produced, while noteworthy for careful design, always on an architectonic basis, has likewise suffered from exaggeration. Reaction against realistic modelling of form has resulted in the thinness and flatness of a transparency, with an appearance of timidity which the irreverent might call washiness.

Preference for the "Thin" School

For old churches I am inclined to prefer work of the Thin school. Its very lack of push and individualism, even its occasional vapidity, are less likely to disturb the serenity and repose that should characterize every church. What the Thick school gains in freshness and emphasis it is apt to lose in refinement. Its work is too personal ever to fade into the quiet atmosphere of an ancient building. With a reinforced concrete and thoroughly up-to-date church I feel it would be perfectly congruous.

The risks which the two schools have to guard against are insipidity in the one case, violence in the other. Who shall decide where the greater danger lies? The only advice I can give is the classic advice of common sense, *μηδὲν ἄγαν*, which may be translated, "never overdo it."

Extracts from a paper read by the author at the R.I.B.A. on Monday last.

THE A.R.P. FILM STUDIOS, EALING GREEN, W.

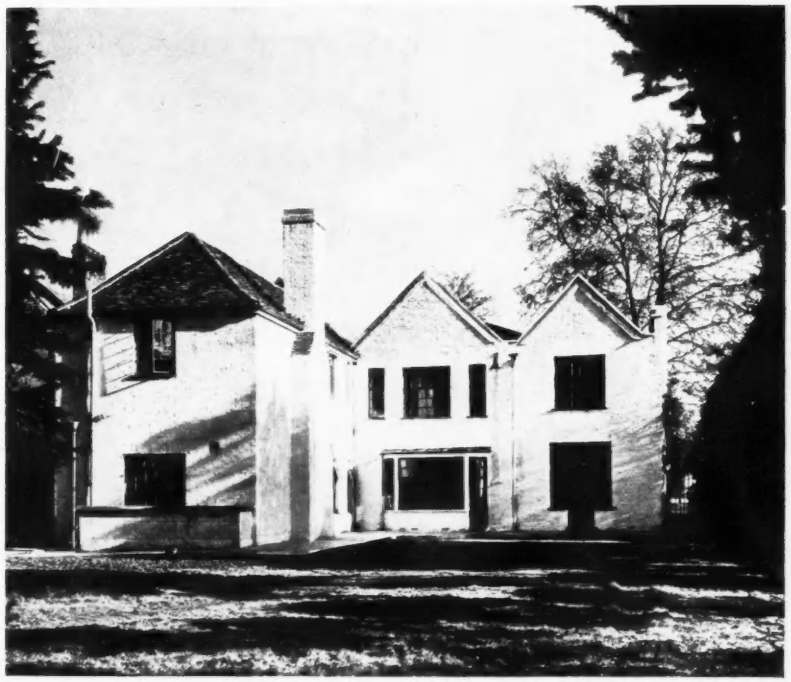
DESIGNED BY MESSRS. ROBERT ATKINSON

The administration block stands at the entrance to the property, some 80 ft. away in an easterly direction from the canteen shown on the layout plan reproduced on the following pages. It is connected by telephone to every part of the studio buildings.

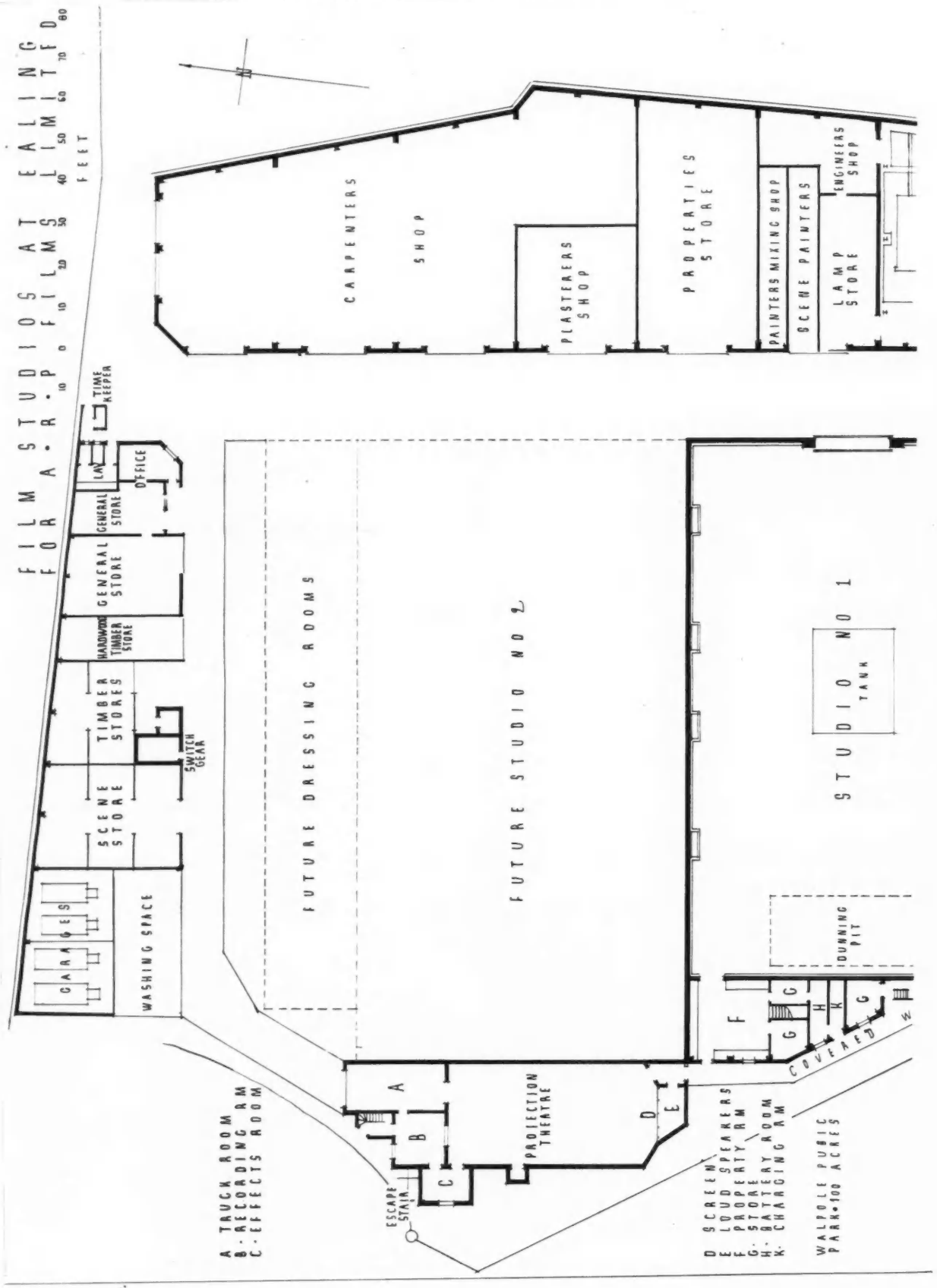
THE question whether this country or America yields the finest films is always one of desperate speculation—and argument. Critical discernment offers no satisfactory solution for the patron, who, to enjoy the film, must assume not an examining but a believing frame of mind; to whom, as with poetry, "its imitations, like the realities from which they are taken, are subject, not for connoisseurship, but for tears and laughter, resentment and affection, and who are too much under the influence of the illusion to admire the genius which has produced it." In the moment in which the skill of the artist is perceived the spell of the art is broken.

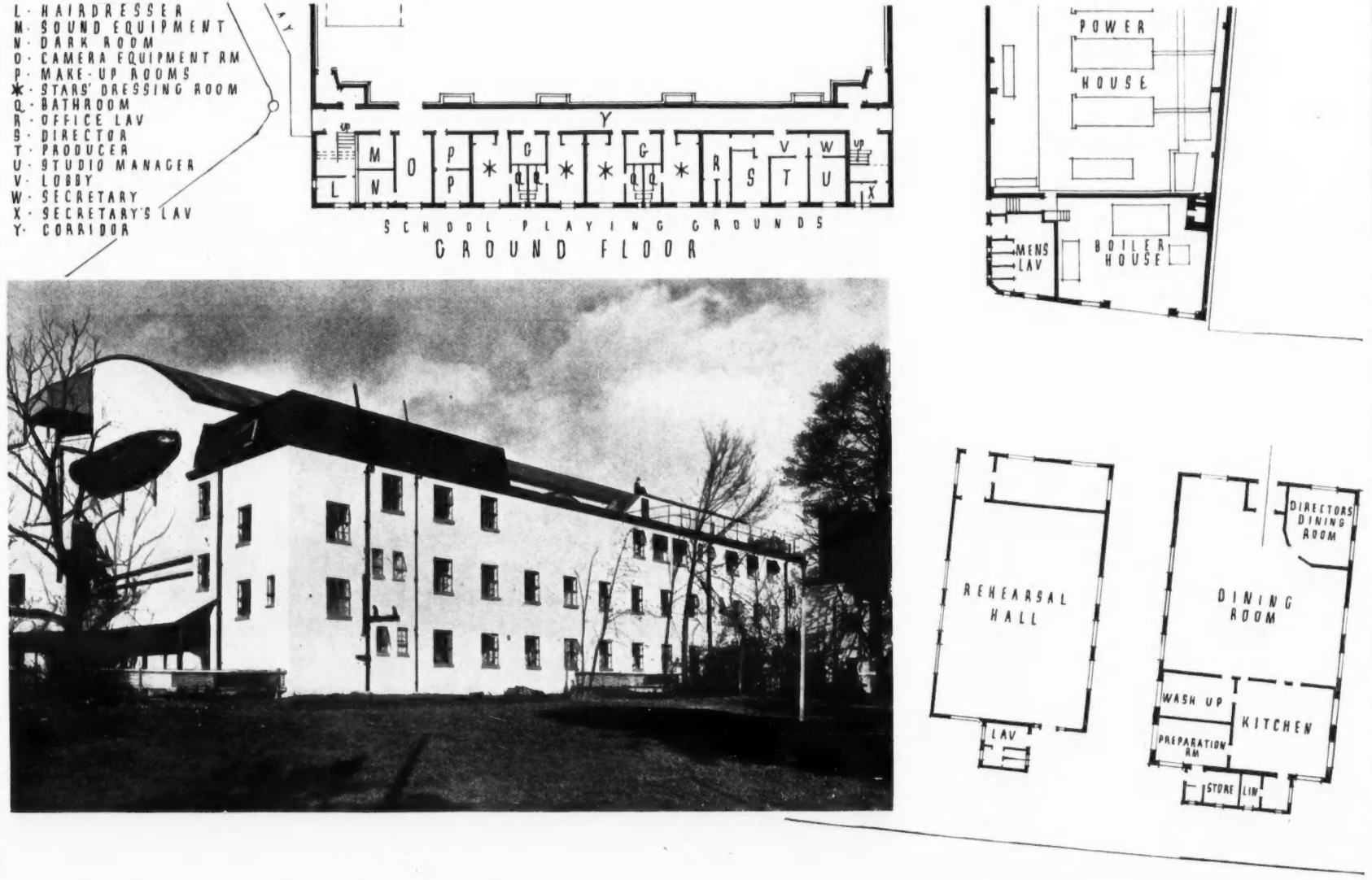
Every mechanical and other means for obtaining and disguising this peculiar skill has been adopted in the new film studios of the Associated Radio Pictures at Ealing Green. In planning and design they are admirably suited to their purpose, and many unique features are incorporated in the construction and equipment. In fact, the studios are regarded as among if not the most modern in Europe.

In the studio, or stage, one of the most important problems confronting the architects was the exclusion of noise. There are two studios, or stages, the second of which is shortly to be erected. These are built as a steel-framed building, with solid brick walls, the dividing wall being carried on insulated foundations as a safeguard against



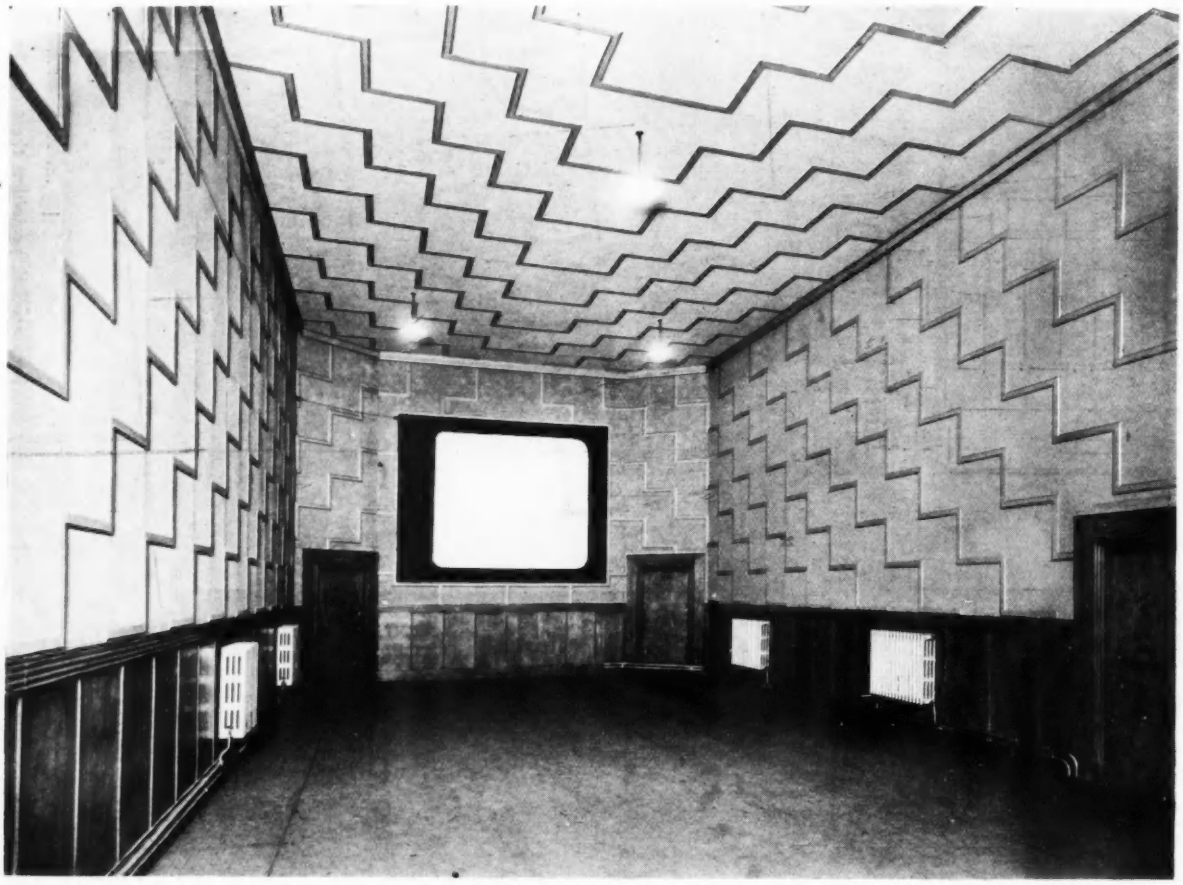
Another view of the administration block. The gardens to this building have been specially laid out to provide settings for possible use during the production of films.


FILM STUDIOS AT EALING
FOR A·R·P FILMS LIMITED
FEET
0 10 20 30 40 50 60 70 80
CARPENTERS SHOP
PLASTERERS SHOP
PROPERTIES STORE
PAINTERS MIXING SHOP
SCENE PAINTERS
LAMP STORE
ENGINEERS SHOP
TIME KEEPER
OFFICE
GENERAL STORE
GENERAL STORE
HARDWOOD TIMBER STORE
TIMBER STORES
SWITCH GEAR
SCENE STORE
CARAGES
WASHING SPACE
FUTURE DRESSING ROOMS
FUTURE STUDIO NO 2
STUDIO NO 1
TANK
DUNNING PIT
COVERED WAY
PROJECTION THEATRE
ESCAPE STAIR
A TRUCK ROOM
B·RECORDING AM
C·EFFECTS ROOM
D SCREEN
E LOUD SPEAKERS
F PROPERTY AM
G STORE
H·BATTERY ROOM
K·CHARGING AM
WALPOLE PUBIC PARK·100 ACRES

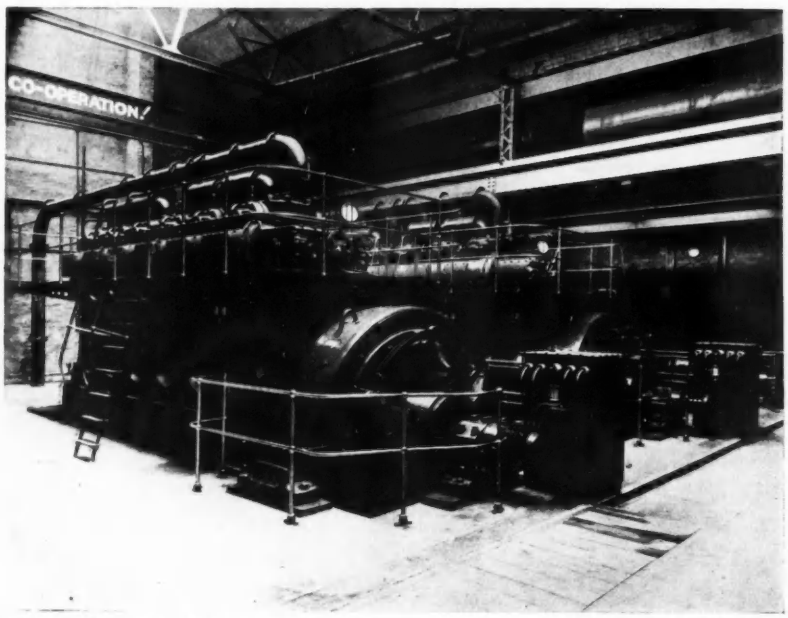


A. R. P. Studios, Ealing Green, W.] [*By Messrs. Robert Atkinson.*

A photograph of the exterior of the studio; and the layout plan of the site. An interior view of one of the stages appears as the frontispiece to this issue. The scheme includes two stages or studios, one of which only has been erected, projection theatre, rehearsal hall, dressing-rooms for "stars" and for the crowd, property department, and canteen.



The projection theatre is used for important pre-views, etc. At the back is the recording and effects room. A prism in the door enables the effects man to see the film from his room. The acoustic effects are similar to those of a large cinema.



A.R.P. Studios, Ealing Green, W.] [*By Messrs. Robert Atkinson.*

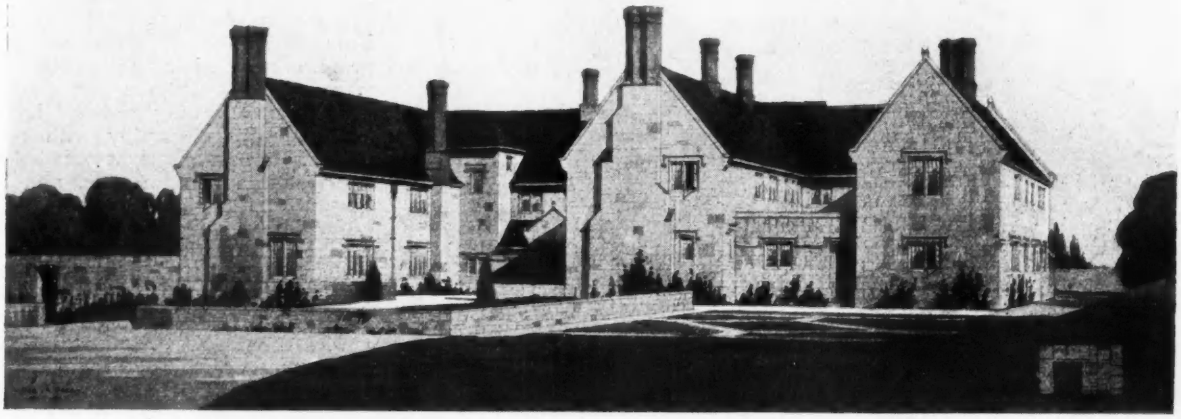
In the power house are two 600 b.h.p. six cylinder vertical cold starting oil engines direct coupled to d.c. generators and one 225 b.h.p. six cylinder vertical oil engine coupled to an a.c. generator. The two former sets are for studio lighting, the latter for generating power for the workshops and general service.

the transmission of noise and vibration between one stage and the other. On the inside of the walls are independent partitions of sound-proof materials, forming an internal shell right round the studio. A still further precaution against noise is provided by the two doors at the main entrance to the studio. Each door rises and falls in one piece. Specially designed mechanism ensures that each door, when in the closed position, is clamped tightly against the adjoining wall, and when falling, opens a flap in the floor below, which allows the door to fit tightly into a trench below floor level.

Among the other important factors to be considered was air-conditioning. The whole of the apparatus for this purpose, in so far as the studio is concerned, is operated from a remote control. Air is taken from outside and passed through an apparatus for warming before work commences in the winter time, and thence by specially constructed channels to the studio itself, where it is delivered in large volumes very slowly and absolutely silently. A means has also been devised whereby the input of cool fresh air can be enormously increased between periods of actual taking of pictures.

BERKS, BUCKS AND OXON ARCHITECTURAL EXHIBITION

REVIEWED BY A. TRYSTAN EDWARDS

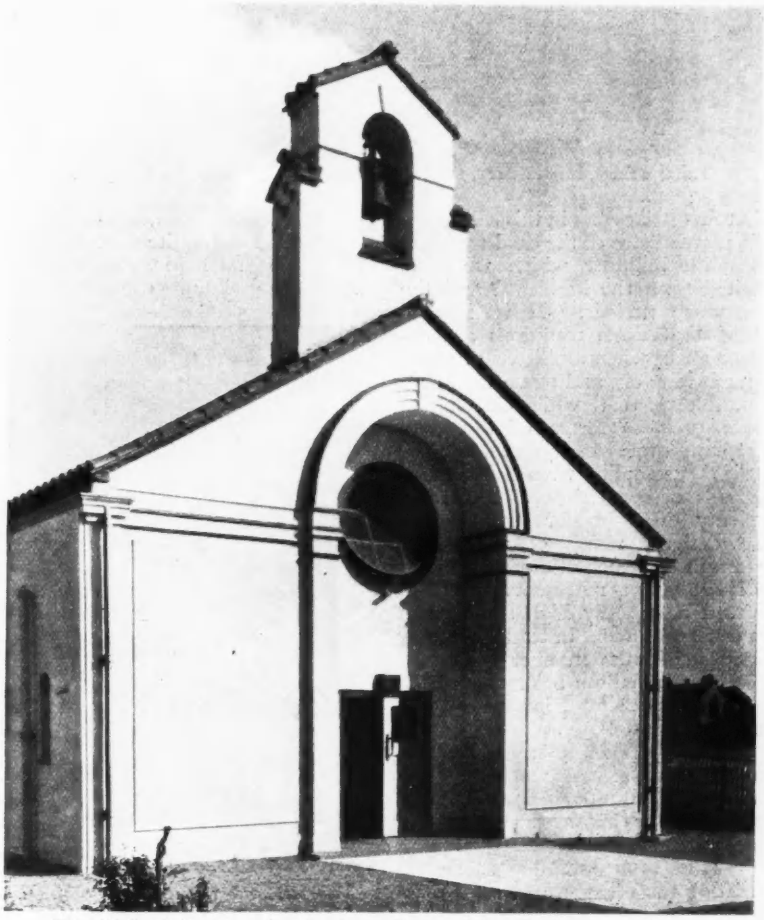


A perspective sketch of Chippenham Manor, near Oxford, reconstructed from designs by N. Fielding Dodd.

IT is five years since these three flourishing architectural societies combined to give an exhibition of their members' work, the last occasion being at Reading. The present exhibition, which was opened in the Oxford Town Hall on December 10, is a particularly good one, and not only serves to emphasize the activity and usefulness of such provincial societies, but comes at an especially opportune time when Oxford is the centre of a marked revival of interest in architecture.

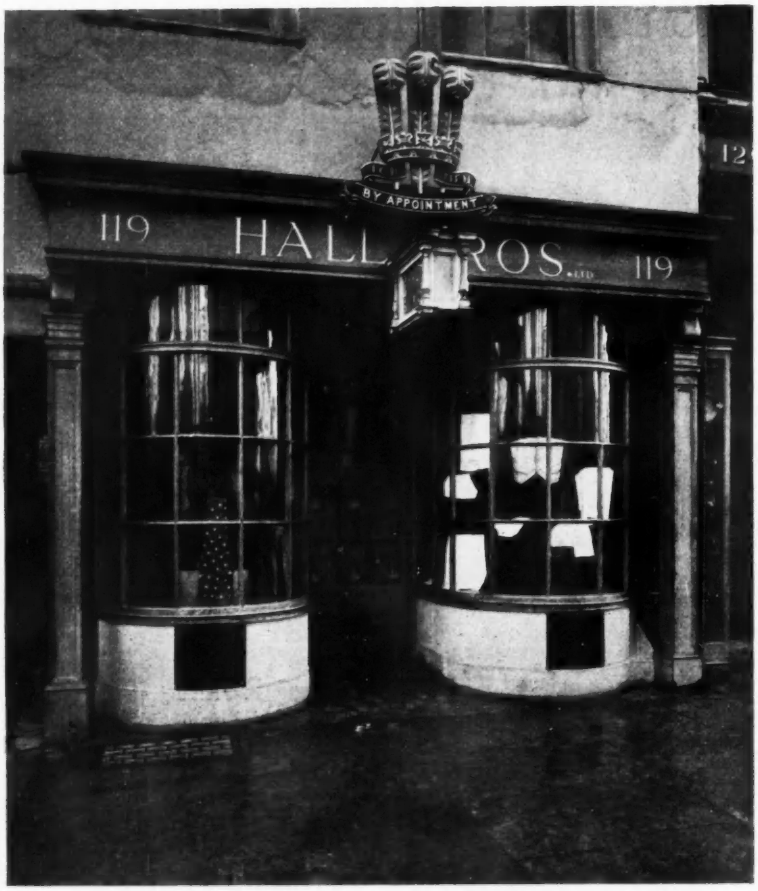
As Mr. Lawrence Dale said in his opening address, members of the architectural profession now have their actions criticized by the public, which expects of them a very high standard of accomplishment and service, and in an historic city such as Oxford the task of the modern architect is rendered doubly difficult by the necessity to harmonize new buildings with the old. Everybody has heard of the Oxford Preservation Society, which is doing its best to prevent the worst architectural atrocities now being committed in Oxford and its environs.

But the aims of the society may be advanced in two ways, first, by censuring the bad work and, secondly, by encouraging the good. This latter object is served by the present exhibition, which should prove to the residents of Oxford that architects in the three counties here represented deserve well of the public and should be encouraged to supervise a far greater proportion of the building work executed in this area than actually falls to their lot.



The Hall of St. Francis, Cowley. Designed by T. Lawrence Dale.

C



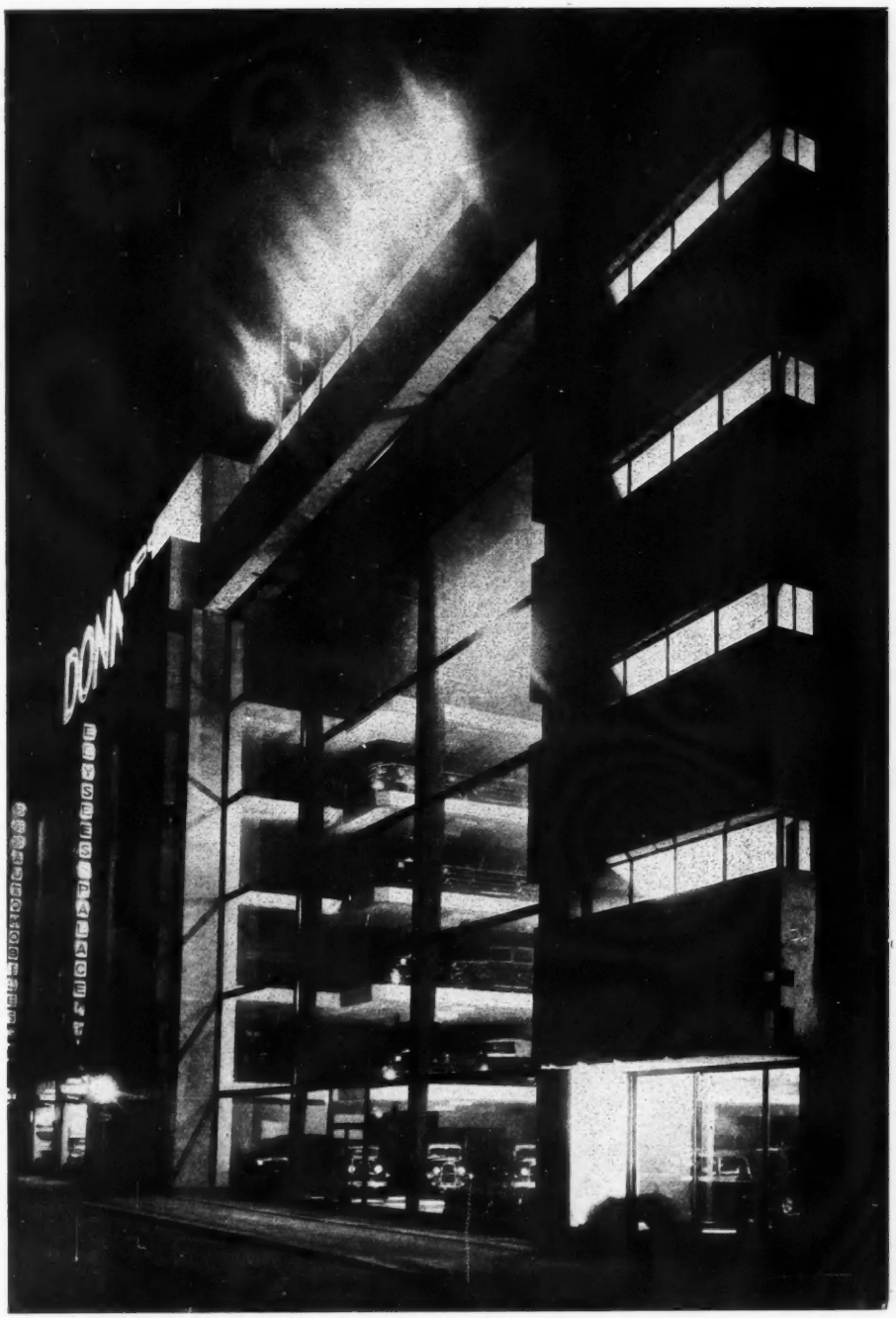
Tailor's shop, High Street, Oxford. Designed by Gilbert T. Gardner.

What first strikes one in this exhibition is the permanence of the dual tradition of English building which we have inherited from the Mediæval and the Renaissance periods. It is idle to pretend that these traditions are extinct or effete when architects of today are inclined again and again to exploit them, finding that, while cleaving to certain gracious forms of the past, they can quite easily make their buildings exemplify twentieth-century standards of convenience. Yet there is plenty of scope for invention in these designs, many of which are modern in the true sense of this word: that is to say, they represent an advance upon an admittedly high standard of past accomplishment instead of starting from zero, in the manner attempted by so many of those belonging to the school of architectural iconoclasts.

Chippinghurst Manor, designed by R. Fielding Dodd, is an admirable example of this sane traditionalism: it is scholarly without being pretentious. Moreover, it has an air of solid comfort. The new St. Peter's Hall, Oxford, shows the same architect's skill in recreating the collegiate style, while in his design for Winfield Orthopædic Hospital, Headington, illustrated by a charming model, quite another manner is displayed, for here we have a strictly utilitarian building conceived on a quite new type of plan. Lawrence Dale, who this year is the President of the Association, shows a number of interesting designs. His village housing scheme, at Wroxton, Oxfordshire, is a delightful group of country dwellings; while the little church here illustrated, the Hall of St. Francis at Cowley, has the qualities of the Regency style. Gilbert Gardner is well represented in this exhibition. Barclay's Bank, St. Aldate's, is a good example of modern Georgian, as is also the beautiful little shopfront, a photograph of which is reproduced on this page. Thomas Rayson has done a number of charming thatched houses which accord admirably with rural scenery, but on the right occasion he affects a more urban style, and the house at Ightham, although of small dimensions, has dignity and refinement. Other interesting exhibits include a design for Corpus Christi College barge by N. W. Harrison; decorations for the Regimental Chapel, Christ Church Cathedral, by H. S. Rogers; an attractively designed farmhouse by Reginald Rix; and several public-houses by H. J. Stribling, which show that this type of building, when treated skilfully, can be an architectural ornament to the countryside.

The arrangement of the exhibition was admirable, and it is noteworthy that the designs were arranged as far as possible in categories of subject, and there was an avoidance of that "jerkiness," the indiscriminate juxtaposition of contrasts in theme which is so distressing in the architectural room at the Royal Academy. In connection with this exhibition there was a conference, at which matters of architectural importance were discussed.

The garden front of "Lady Wood," Ightham, Kent. Designed by Thomas Rayson.



The exterior of the Garage Marbeuf by night. The window space is some 60 feet high and 70 feet wide, and is set back between massive stonework.

These showrooms, facing the rue Marbeuf, are new; behind is a slightly older building, garaging 500 cars, with double-ramp access from floor to floor.

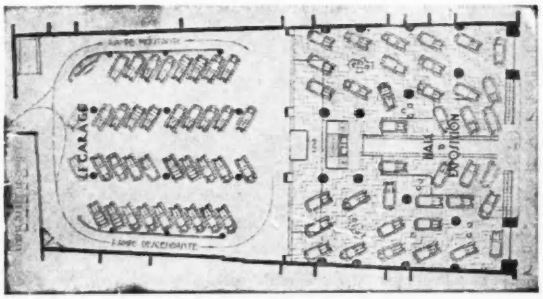
GARAGE MARBEUF MOTOR SHOWROOMS PARIS

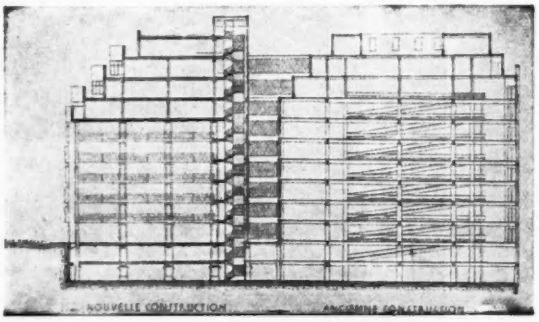
Laprade and Bazin *Architects*

DESCRIBED BY J. E. F. DE LUNE

THE erection of the gigantic Marbeuf car exhibition hall, off the Champs Elysées, marked the beginning of a new era in the architecture of commercial buildings in Paris. We owe it to the talent and the audacity of Messrs. Laprade and Bazin, well-known figures in the new generation of French architects. Covering a surface of over 3,800 sq. ft., it rises eight stories above the street level, in addition to affording two underground.

The street front is a marvel of boldness: between two powerful blocks of reinforced concrete, striped with oblong windows, spreads a huge glass front, 60 ft. high and 70 ft. wide, over which a wide lintel of concrete runs, upheld by two pillars of gracefully-curved steel, creating, by their slender elegance, an interesting contrast with the massive stonework. The uppermost floors are on a succession of cubic setbacks, and

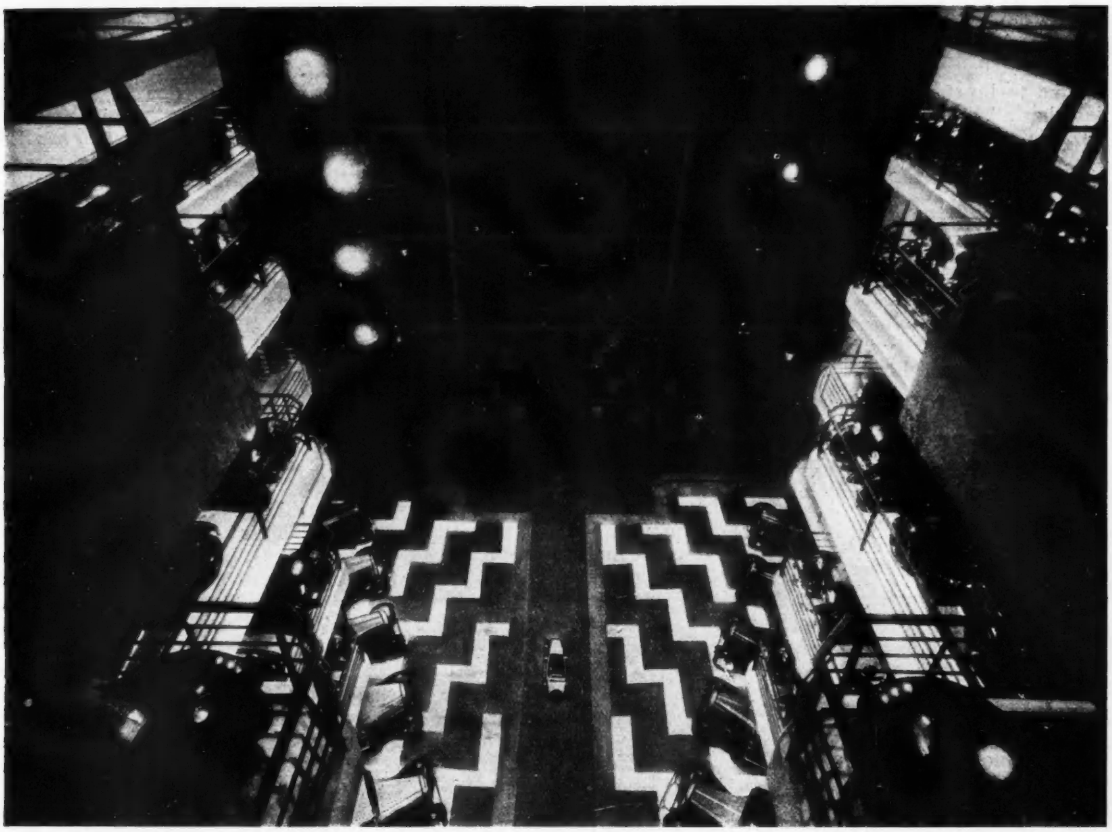




A perspective drawing of the exterior; ground floor plan; and section. In the plan the new building, facing the rue Marbeuf, is shown on the right; in the section, on the left. Both illustrate the operation of the double ramp system of communication for cars passing from floor to floor.

Garage Marbeuf, Paris.] [*By Laprade and Bazin.*

Looking upwards in the showrooms. In this unique design, the floors are arranged as balconies overlooking the ground floor, and the upper tiers are set back, thus adding to the effect of immensity produced on a spectator in the street, whence they are all visible.



Garage Marbeuf, Paris.] [*By Laprade and Bazin*

Looking downwards in the showrooms. The single car standing in the centre of the ground floor gives a graphic idea of the scale on which the building is conceived. Facing the camera is the enormous window to the street seen in the illustration reproduced on page 801.

on the top is a roof garden, well above the surrounding houses. The colour scheme of the whole stonework is in a deep yellow.

The interior contains five balconies, also in reinforced concrete, setting back at right angles and joining in the rear of the hall, where the staircase and the elevators make a centre axis.

A peculiarity of the construction is the massive pillars which uphold the galleries in the main hall. In the underground floors they are made of reinforced concrete, whereas above the street level they are of steel only. The reason of this new conception was the desire for rapidity of erection, which, in fact, was very great, the first two two floors and the basement being ready for use within two months.

Behind the car hall spreads a great garage built in 1926 and capable of parking over 500 cars. A novelty in it was the double ramp, one rising, the other descending, at each floor level.

We must be thankful to Messrs. Laprade and Bazin for having dared to make an actual realization of the principles of modern architecture—light, space and simplicity. Now that they have proved what can be done in this style on a large scale, no doubt their example will be followed and they will find many imitators—a sure sign of success.

LETTERS FROM READERS

Plaster for Concrete Ceilings

SIR,—The most satisfactory method of providing a good key for plaster on the soffit of concrete floors and ceilings is to fill in a layer about ¾ in. thick of concrete, mixed with fine aggregate and cement only, with no sand. The bulk concrete can then be filled in on top of this, and it will be found that when the centering is struck a very adequate key is left.

With regard to the mixture of the plaster to be applied to this surface, the best results are obtained with a gauged plaster consisting of a mixture of one part of lime putty to two parts of sand, with one of Portland cement added to four of this mixture.

There is a liquid on the market which can be painted on the shuttering and affords very good results, as it acts upon the cement and leaves a rough surface when the shuttering is removed.

Anyone requiring to go into the question of plastering thoroughly would be well advised to get into touch with the Building Research Station, near Watford, as they have devoted a lot of time to the subject, and from time to time published results of their researches. HERBERT BUCKLAND

The New Form of Contract

SIR,—It is pleasing to observe that a series of articles written by an expert, and dealing with the new Form of Contract, have commenced in the JOURNAL, for the first reading of a document of this kind is very difficult without an outline of the principal clauses from the legal mind.

Mr. Hoare has commenced by pointing out what he considers are certain benefits to the architect in the new form, and I trust that he will provide both myself, and others who are equally despondent, with reason for good cheer when he describes (and I hope he does) Clause ten, and that depressing finale to Clause one,

introducing "expense and loss," which reads in conjunction with Clause ten.

Describing matters in connection with the Arbitration Clause, which is in two sections (one to be struck out), "A," providing that all disputes are referred to arbitration, and "B," which is similar to the clause in the old form, and leaves certain matters to the sole discretion of the architect, Mr. Hoare has formed an opinion that these matters, left to the architect's discretion, may not, after all, be excepted from arbitration.

Would Mr. Hoare kindly inform us as to the wording in the early clauses of the contract which leads him to make this suggestion.

Possibly many architects will feel happier by being relieved from the position of *quasi-arbiter*, and will prefer to let section "A" in the clause stand; but section "B" would be useless if reliance cannot be placed upon it.

G. E. D.

The Seven Sisters Ramp

SIR,—I had always thought your Journal a strict guardian of all the amenities of the countryside. I was therefore surprised and shocked at Astragal's recent remarks, and the letter printed in last week's issue.

I am a motorist myself, and welcome the car as a helpmate in discovering the country's beauties. Nevertheless, I was overjoyed at the perfectly reasonable provision in the Traffic Act, allowing motorists to park within a few yards of a roadway but to go nowhere else. Must motorists disturb every haunt of peace and quiet because it is possible to get a car there? Not long ago I went down to the South Downs, leaving my car by a lane at the foot of the hills, and walking over to Chanctonbury. To my horror, when I got there I found cars roving over the beautiful turf, scoring it with wheel marks and utterly disturbing the peace and joy of the place. I have also found people running cars (with gramophones or wireless sets!) on to such places as the top of Holmbury Hill. Would Astragal condone such things?

I have been a walker for thirty years, and although I now frequently use a car to assist me in walks, I have found that the country cannot really be enjoyed except by walking, and cars should be kept within limits. And when will someone tackle the nuisance of these motor cycle trials ("trials," indeed, to the walker) that invade the tracks through our woodlands, and over all our hills and paths, making Sundays hideous? COUNTRY LOVER

QUESTIONS THAT ARISE

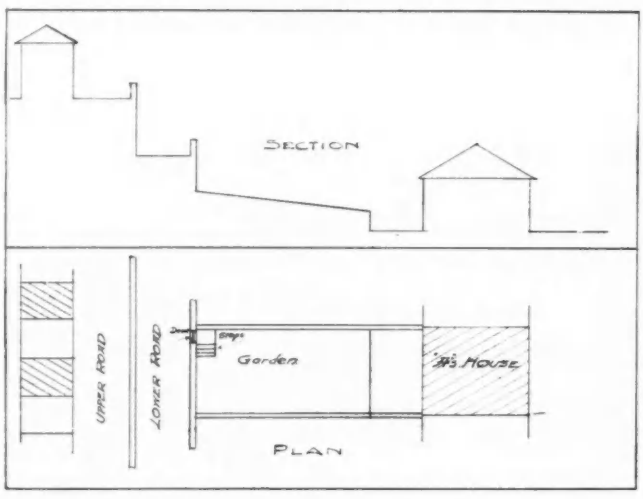
Ownership of Wall

J. T. B. writes: "*The accompanying sketch shows the situation of a wall between a road and private property. The wall collapsed into the garden about two years ago, and the urban district council, who maintain the road, called upon the owner of the property to rebuild the wall. The owner denied liability, and nothing further was done except that the council fenced off the breach and kept it lighted each night.*

"*About a year ago the council decided to rebuild the wall, and are now suing the owner for the cost of doing so. Is the owner liable* (a) *for the whole wall;* (b) *for that part of the wall above the road level;* or (c) *for that part of the wall below the road level?*

"*It is suggested by the council that this road is not an ordinary one, inasmuch as it leads across what was originally the property of an earl, who was the owner of the whole of the property. When the urban council came into being, the road was 'as an accommodation' taken over and maintained.* (*This is only, so far, a surmise.*) *In other words, the wall was built originally to divide two properties before the road came into being, and the road was afterwards constructed, as it so happened, against the wall. The council also contend that the wall is as necessary for the protection of the owner 'A''s property as it is for the road. There is a door through the wall providing a rear entrance to 'A''s garden, and steps lead down from the door into the garden. These steps also collapsed with the wall, and have been, of course, re-erected by the council.*

"*The council state that if the wall is the property of the council, 'A' has no right to build against it, or attach any fixtures to it, and that they should have permission to examine the wall on the inside to see that it is in order. They also state that a limit should be set to the depth to which 'A' may dig his garden. They point out that 'A' is, in fact, using the wall for hanging clothes lines* (*thus adding to the strain on the wall*), *and has undermined it by digging, and also that the steps and doorway indicate responsibility for the maintenance of the wall. The wall extends for about a quarter of a mile on either side, and runs along the rear of a great number of gardens. In places there is a sheer 'drop' of 40 ft. from road level to the garden, and at such a place the wall stands on a rock foundation, this rocky cliff extending almost up to road surface.*"



Plan and section showing the situation of the wall between a road and private property, referred to in the query on this page.

I am clearly of opinion that the council do not own the wall, and "A" is under no liability to maintain it in the absence of express agreement to the contrary. "A" has a liability to fence off his property so as to avoid permitting a danger to those on the highway. If he fails to do so, the highway authority can undertake the work and recover the cost thereof from "A."

Taking over a road by the highway authority is for the purpose of maintaining it, but the act of taking over does not divest the ownership in the soil under the road from whom it was vested immediately prior to the act of taking over (see *Harrison* v. *Duke of Rutland* [*1893*] *1 Q.B. 155*; *Hickman* v. *Maisey* [*1900*] *1 Q.B. 752*).

It will therefore follow that the wall did not pass to the council when the road was taken over, and that "A" can use it however he pleases.

In my view, the council was entitled to erect a proper fence only so far as it was necessary to prevent danger to those using the highway for a lawful purpose, but this may not extend to the cost of the re-erection of a brick wall.

It must be appreciated that the question does not contain a complete history of the property, and therefore I have dealt with the matter on general principles which may, or may not, have to be modified in the light of all the facts. E. F. I.

THE NEW R.I.B.A. FORM OF CONTRACT

BY MICHAEL HOARE, B.A.

Joint Author of The Standard Form of Building Contract

IN every form of building contract some provision has to be included whereby variations can be made in the design or method of execution of the building while the work is actually under construction, that is to say, after the contract price has been agreed; and both the 1909 form and the new form contain a clause providing that no variation shall vitiate the contract and that the architect shall have power to order extras for which the contractor is entitled to extra payment. Both forms also provide in effect that should an error in description or in quantity of the works appear in the bills of quantities, or should any item of work be omitted from them, the misdescription, error or omission is to be rectified and treated as an extra. So far as it goes, such a provision is satisfactory enough, but more than this is required. In what circumstances can there be said to be "an error in the bills of quantities" which is to be treated in this way? The contractor undertakes in normal cases to execute the contract works for a named sum, in accordance with the articles of agreement, which incorporate the conditions of contract, the plans, drawings, specifications and bills of quantities. In some cases, in order to achieve the result required by the plans, drawings and specifications, it becomes necessary to execute work or provide materials which are either not specifically or not sufficiently described in the bills of quantities, and not infrequently in the past the question whether the omission to mention or the insufficient description of such work in the bills amounts to "an error in the bills" has given rise to dispute.

For example, it may not appear from a reading of the bills of quantities what is the nature of the soil in which the necessary excavations have to be made, or whether the soil on the whole of the site is of the same nature. If, after the works have started, the contractor meets with some serious obstruction in the soil which increases the cost of excavation, the increase may be so serious that the contract price is, from the contractor's point of view, quite inadequate. Can the contractor in these circumstances claim to be entitled to extra payment?

Again, cases have arisen in which the cost to the contractor of carrying out the joinery and plastering work described in the bills has been far in excess of the amount contemplated by him when pricing the bills: the angles, curves and reveals, which appear upon the plans have not been enumerated or described in the bills, and the question has arisen whether there can in the circumstances be said to be an error in the bills. The difficulty confronting the contractor of contending successfully that there is an error, and that he is entitled to extra payment for work not specifically or sufficiently described in the bills, is increased when it is plain upon the face of the other contract documents, the drawings and the specification, that such works are contemplated. This difficulty was even more formidable when the contract in question was in the 1909 form, for that form contained the following condition:

> The contractor shall provide everything necessary for the proper execution of the works according to the true intent and meaning of the drawings and specification taken together, whether the same may or may not be particularly shown on the drawings or described in the specification provided that the same is reasonably to be inferred therefrom.

In fairness to contractors a very important change has been made by the 1931 form in the conditions of contract dealing with this matter. It will be remembered that in 1922 the Chartered Surveyors' Institution, with the approval of the building trade, issued a code prescribing a standard method of measurement of building works and laying down rules to be observed in the preparation of bills of quantities. These rules state what matters are specially to be brought to the notice of contractors, how measurements in particular cases are to be given and—perhaps the most important of all—what matters are to be separately specified.

Some instances, taken at random, will serve to illustrate the importance of these provisions. Under the heading "Excavation" the rules provide: "Where practicable the nature of the soil shall be described and attention shall be drawn to existing trial holes. Excavation in rock shall be given separately." Under "Bricklayer": "Walls built battering shall be given separately and so described. Rough cutting shall be measured at each change of direction," and under "Plasterer": "Arrises, quirks and rounded angles (internal and external), whether to ceiling or wall plastering, and junctions of new and old work shall be given in feet run. The mitres, etc., to rounded angles of 1-in. radius and over shall be enumerated." While with regard to moulding generally it is provided that "raking and circular portions shall be given separately, and all mitres, ramps, stops, etc., enumerated."

If a bill of quantities has been prepared in accordance with these rules, the contractor will be able by reading the bills of quantities alone, and without reference to the other contract documents, fully to inform himself of all matters to be taken into consideration when pricing the bills and of any circumstances which are likely to make the operations which he is being asked to perform more expensive than usual; and if these rules, detailed as they are, are made obligatory and binding upon the employer, the vexed question as to whether there is or is not an "error in the bills of quantities" can no longer be the source of dispute which it has been in the past; for if anything is not described in the manner laid down by the rules or any item of work required to be given separately is not so given, there will clearly be an error in the bills.

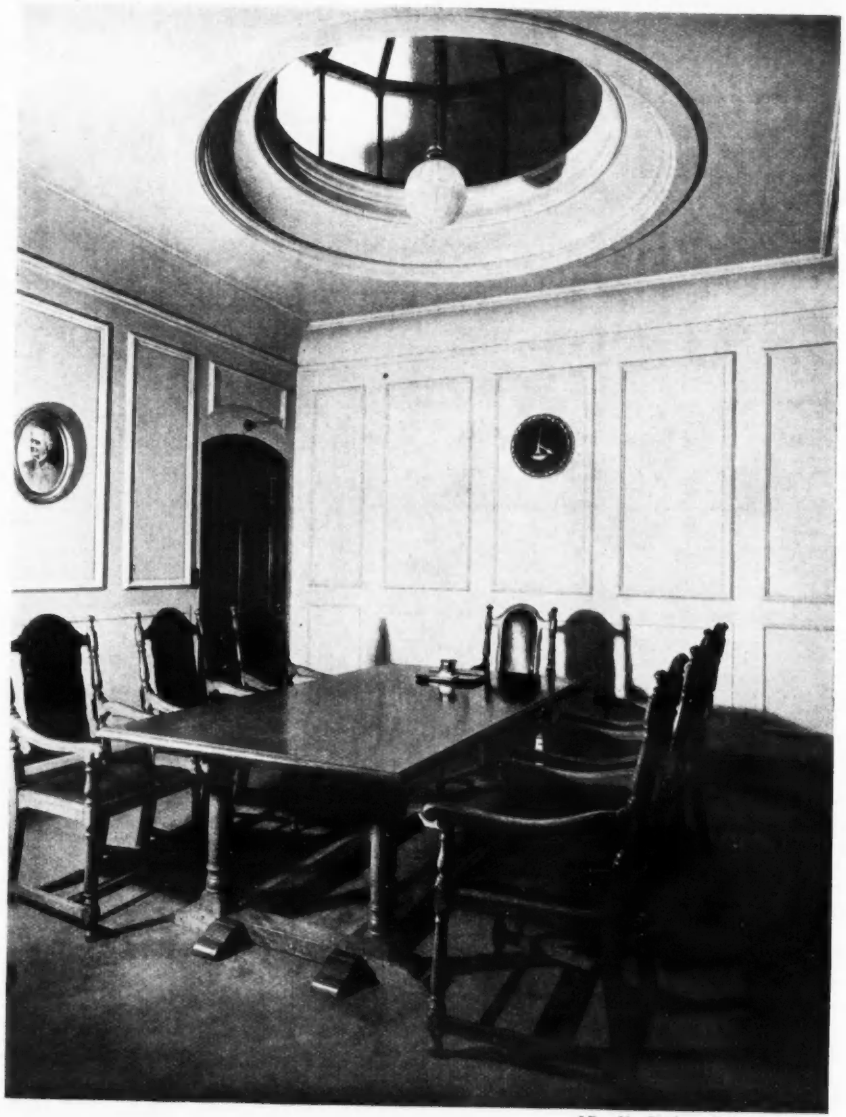
The new form, therefore, while retaining the old provision that "any error in description or in quantity in or omission of items from the bills of quantities shall . . . be rectified and treated as an extra or omission," also provides that "the quality and quantity of the work included in the contract sum shall be deemed to be that which is set out in the bills of quantities, which bills, unless otherwise stated, shall be deemed to have been prepared in accordance with the Standard Method of Measurement of Building Works last before issued by the Chartered Surveyors' Institution." And, in order to remove any uncertainty which might still remain and to make plain the new importance which for the future is to attach to the bills of quantities, the conditions require the contractor to provide everything necessary according to the true intent and meaning not only—as hitherto—of the drawings and specification taken together, but according to the true intent and meaning of those two documents and the bills of quantities taken together.

It is not the contractor alone who will benefit by this innovation: immunity from the possibility of dispute is equally beneficial to both parties, while the precise description in the bills of the work to be done and the plain definition of what is "an error in the bills" will relieve the contractor of the arduous and often lengthy task of examining and checking the bills, and so give the employer the advantage of close tendering at a keen price.

[*To be concluded—the first article on this subject appeared on December 2.*]

Ninth Church of Christ, Scientist, Westminster, S.W.]

In the article commencing on the facing page, tribute is paid to the manner in which this building meets the comprehensive programme of requirements laid down—among them, ample cloak and lavatory accommodation. The cloak room and curved corridor here shown are under the main auditorium, and may be identified near the centre of section A-A, reproduced on page 809.



[*By Sir Herbert Baker, A.R.A.*

Christian Scientists take a very wide view of the social obligations associated with their tenets: to fulfil their needs, a church must be very much more than a mere place of worship. Accordingly, adjacent to the entrance hall giving access to church proper and Sunday school, a number of offices are provided, on several floors. This photograph is of the top-lit board room.

CHRISTIAN SCIENCE CHURCHES

Their Plan Requirements as Exemplified in the Latest London Building

BY J. S. BRAITHWAITE

A considerable number of Christian Science churches have been put up in England since the war. Several of them have been the work of distinguished architects, and have formed splendid and lasting contributions to the architecture of today. The Christian Science church presents a novel and somewhat complicated problem of design, and in the latest of these churches, the Ninth Church of Christ, Scientist, in Marsham Street, by Sir Herbert Baker, A.R.A., this problem is solved more completely and in a more representative manner than in any previous church of this kind. The architect, in this case, had an unusually full and carefully-thought-out programme put before him, with the result that his work is rich in subtleties of planning and arrangement. The following notes on the arrangement of the church will doubtless establish a precedent for many years to come. They have been written for THE ARCHITECTS' JOURNAL by a prominent member of the Building Committee.

IN THE ARCHITECTS' JOURNAL for May 25, 1927, there appeared an article entitled "Church Form and Christian Science," by Hope Bagenal, dealing with the acoustic problems that confront an architect approaching the question of designing a Christian Science church building.

What Mr. Bagenal did not touch on, however, was the accommodation which is necessary in order to present a completed structure for use as a Christian Science church.

CHRISTIAN SCIENCE NEEDS

What *are* the needs of a Christian Science church? Undoubtedly Mrs. Eddy has given to the world an idea of Church which is different from that ordinarily entertained. She does not restrict the use of a church building to the holding of services, or the provision of a Sunday school. She envisages an institution that has a definite educational purpose. She requires that it shall afford proof of its utility, and this is to take the form of elevating the race and "rousing the dormant understanding from material beliefs to the apprehension of spiritual ideas." (*Science and Health*). All this is included in the healing of sickness and sin, which she postulates as being part of the normal activity of the true followers of Christ.

THE NINTH CHURCH OF CHRIST, SCIENTIST

For the purposes of illustration we select the latest completed church edifice —that of Ninth Church of Christ, Scientist, London, in Marsham Street, Westminster, the building designed by Sir Herbert Baker, of which a brief notice appeared in this JOURNAL in January, 1931.

The main auditorium, which has a seating capacity of 1,100, is circular in form, and is entirely free from pillars or cornices at the floor level, so that the audience in any part of the hall can see and hear the Reader at the desk and *vice versa*—a very important point.

THE SUNDAY SCHOOL

The Sunday school, with its "primitive" form, seats about 500, and in a very simple manner lends itself to subdivision into numerous class-rooms. The architectural merits of both these halls have been dealt with elsewhere. Let us revert briefly to the remainder of the accommodation provided by this building, which meets ideally the requirements of its membership.

ROOMS FOR INDIVIDUALS

In the first place, there are two Readers' rooms, each with lavatory accommodation attached, and giving easy access to the platform. These rooms, which are sometimes used for study, or for interviewing purposes, are pleasant rooms, of a fair size. There is also a room for the organist, and a room for the soloist. These are secondary rooms, as a rule, used only for the brief period of waiting before taking part in the service. The superintendent of the Sunday school has a room, in connection with the Sunday school.

THE BOARD ROOM

The most important of the offices is the board room, which is both well lit and well ventilated, and provides accommodation for a board of seven to nine members. Within easy reach of the board room is the clerk's office, which is itself readily accessible to the main entrance hall, and thus to members, or intending applicants. There is also a treasurer's office.

DRESSING-ROOMS

In close communication with the main auditorium there are two rooms, which might be called dressing-rooms, one for the men ushers, the other for the women ushers. This is rather an important item that is sometimes overlooked, but it is only fair to ushers, who have to present a tidy appearance, to give them quarters where they can complete their toilet. The church supervisor has an office, centrally located, as all the arrangements in connection with the engineering work, the cleaning work, the preparation of committee rooms, etc., must pass through his hands. Then there is the boiler house, where the heating, ventilating and electrical installation is housed; and leading out of this is the engineer's room, which can be used partly as workshop and partly as sitting-room. There is also a room for the use of the women cleaners.

LAVATORIES

Lavatory accommodation is, of course, important, and care has been taken to see that adequate provision is made in this respect, not only for adults, but separately for children as well. Adjacent to one of the lavatories is a room with a specially provided sink for arranging flowers. A large cloak-room, immediately below the auditorium, and from which stairs lead up to the centre of the auditorium, is an important feature, allowing ample space for overcoats, hats and umbrellas, to be checked in before people take their seats in the well warmed and ventilated auditorium.

All of the above accommodation might, perhaps, be looked for in any church building that undertook to provide for a large congregation and Sunday school, though, as a matter of fact, they are seldom to be found in such completeness.

SPECIAL ACCOMMODATION

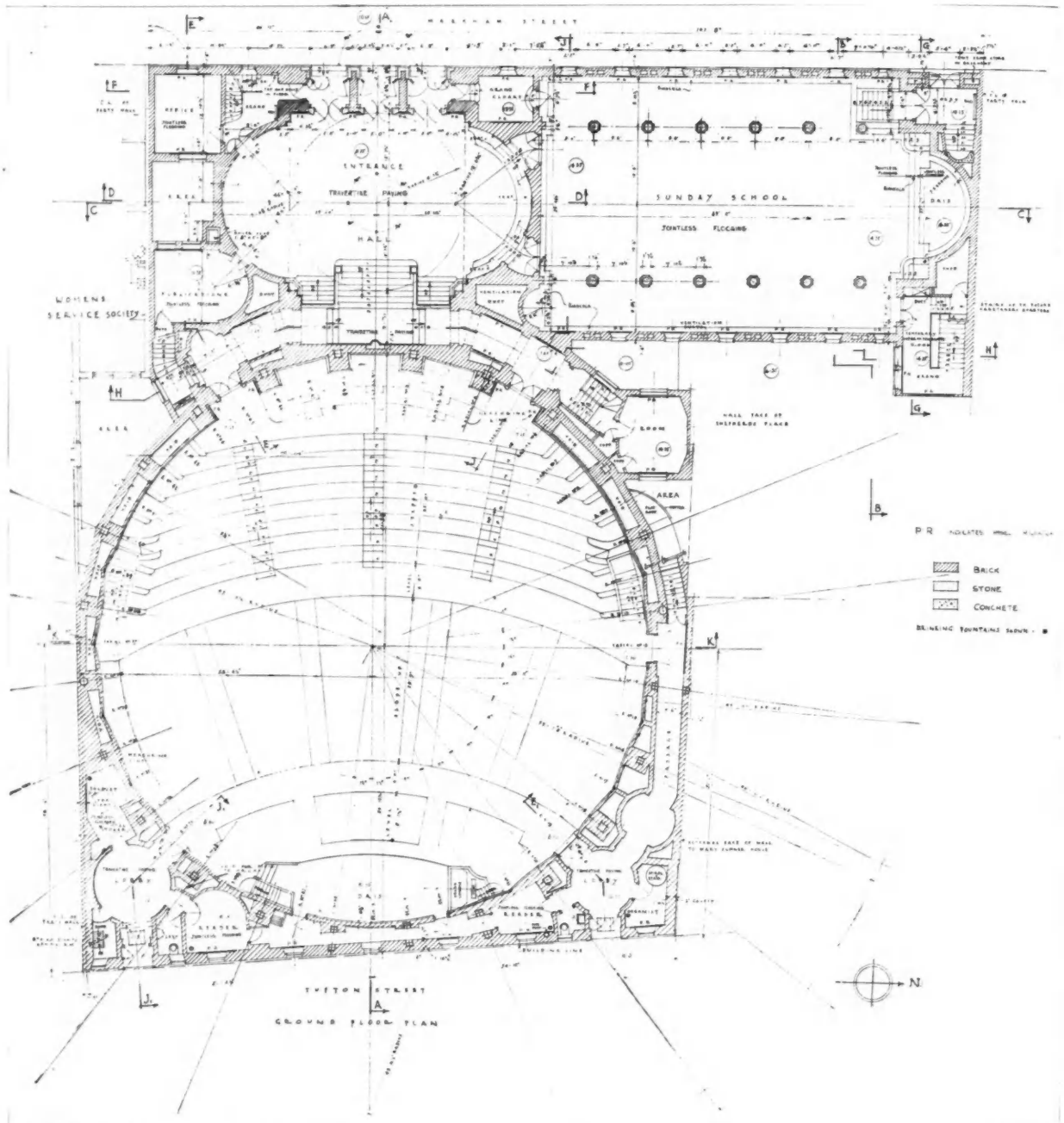
We come now to the special accommodation, which is, perhaps, peculiar to the needs of a Christian Science church. Foremost among this is the entrance hall. Christian Science meetings are regarded as providing an opportunity for the exchange of friendly intercourse before and after the services. This takes place in considerable degree in the beautiful entrance hall which Sir Herbert Baker has provided in the Marsham Street building. Where churches have wide open spaces in front of them the conversations often take place in front of the church; but such a thing would be impossible in a narrow street such as Marsham Street, and the architect wisely took this point into consideration.

ROOMS FOR EDUCATIONAL ACTIVITIES

Next, in regard to the educational activities referred to at the beginning of this article, committees are appointed to deal with such questions as the giving

here shown are under the main auditorium, and may be identified near the centre of section A-A, reproduced on page 809.

and Sunday school, a number of offices are provided, on several floors. This photograph is of the top-lit board room.

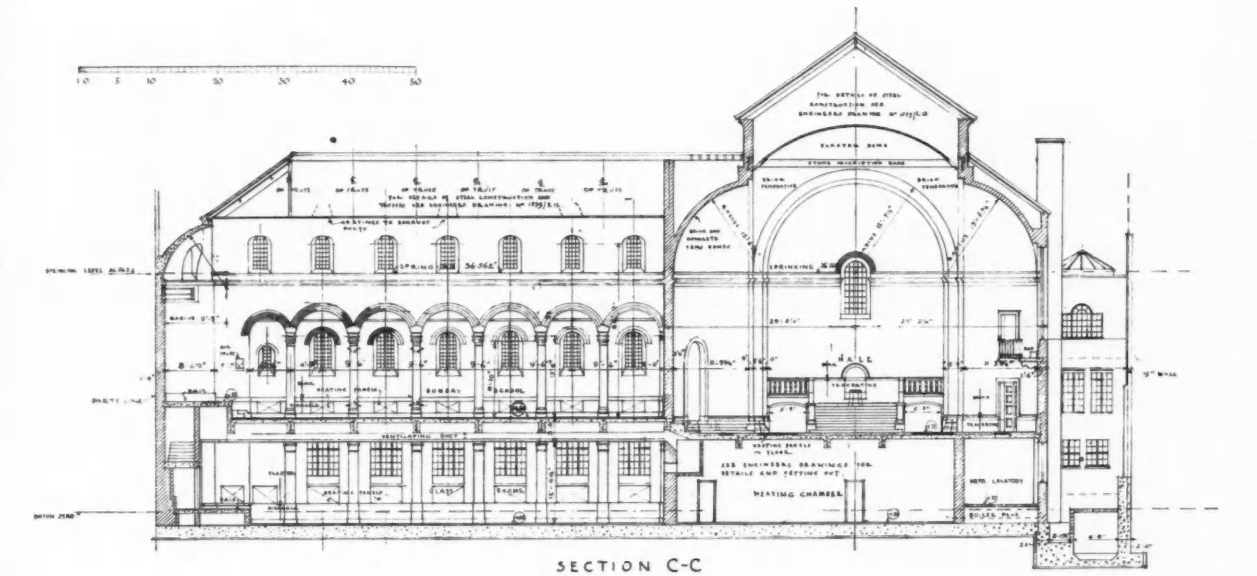


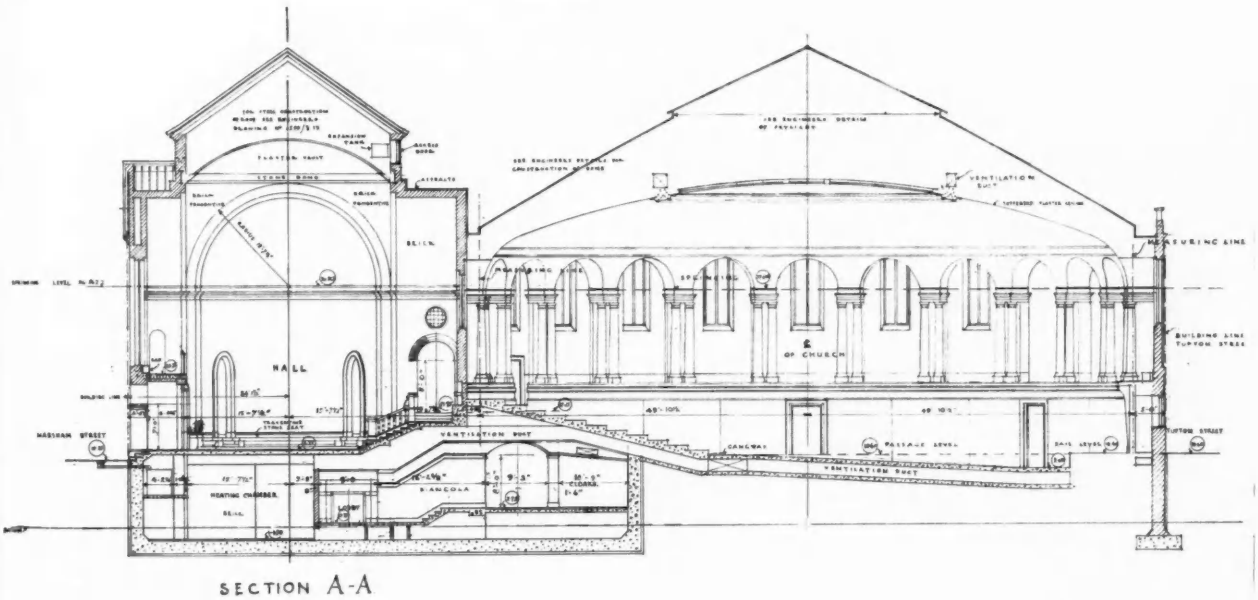
Ninth Church of Christ, Scientist, Westminster, S.W.]

The ground-floor plan will repay the closest comparative scrutiny with the accompanying article. Readers are, no doubt, already familiar with the main lines of Sir Herbert Baker's layout; but it is only by reading the planning details in the light of what he was enjoined to provide that the achievement is fully revealed. As a single instance, it may be pointed out that it is possible for invalids in chairs to be wheeled from the street level into the centre of the auditorium without negotiating any steps; yet steps are a vital element in the design, not only of the beautiful entrance hall, but actually of the auditorium itself.

of lectures and the distribution of literature. There are also a number of other church activities calling for the use of committee rooms. Sir Herbert Baker has provided two committee rooms adjoining the entrance hall, each of which will accommodate a committee of from five to ten people. The actual distribution of literature calls for more space than can be provided by an ordinary committee room, and a large lower hall beneath the Sunday school amply takes care of this committee's requirements, which include the storing of literature and the packing of it into the required parcel form for distribution. This lower hall will also seat about 400, and when the church building is used for a lecture, amplifying arrangements are made both in the Sunday school and in this lower hall, which will thus, in practice, bring the total seating capacity of the church to over 2,000.

This practically completes the list of accommodation, though mention should perhaps be made of a special telephone room and archives room, as well as of





[*By Sir Herbert Baker, A.R.A.*

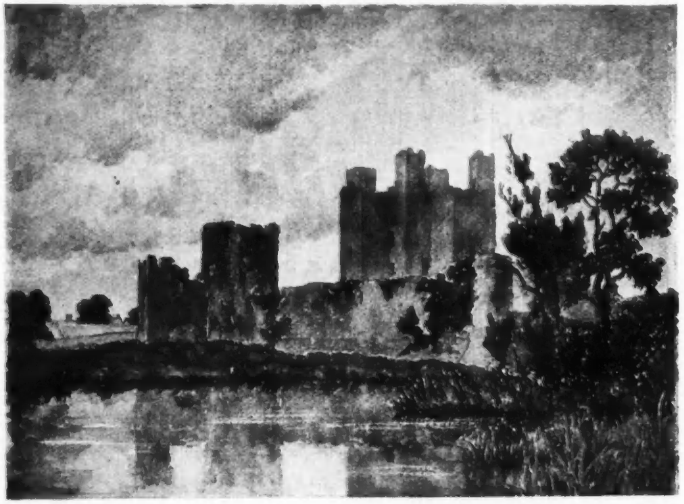
These two sections are reproduced to the same scale as the plan on the facing page. Section C-C is taken along the centre line of the Sunday school and the major axis of the entrance hall; below the former are a number of class-rooms; adjacent to the latter, several floors of offices. Section A-A is taken along the minor axis of the entrance hall and through the centre of the auditorium. A portion of the floor of the latter nearest the dais is raked, while that farthest away is stepped; by this means, and the circular form of the church, there is not a seat in it which does not afford a direct view of the Reader upon the dais.

the wall drinking founts which are conveniently placed in the corridors.

One other unusual feature, which deserves a place all to itself, is the fact that invalids, in wheel-chairs, can be wheeled along a passage into a space specially roped off at the centre edge of the auditorium, without coming up any steps, and without attracting any attention. This provision is proving itself a great boon.

A MODEL OF ACCOMMODATION

It would be difficult to improve upon the accommodation provided by this latest Christian Science edifice, and the architect is to be congratulated on having so completely interpreted the needs of his clients. There can be no doubt that Christian Scientists require that their buildings shall comply with an exacting test, and they expect them to manifest the qualities of completeness, and orderly and harmonious arrangement, expressive of the Principle which the Christian Scientists themselves are claiming to demonstrate.



By H. G. Leask.] (Watercolour : 12″ × 9″)

The Castle, Trim, Co. Meath.

THE SKETCH CLUB

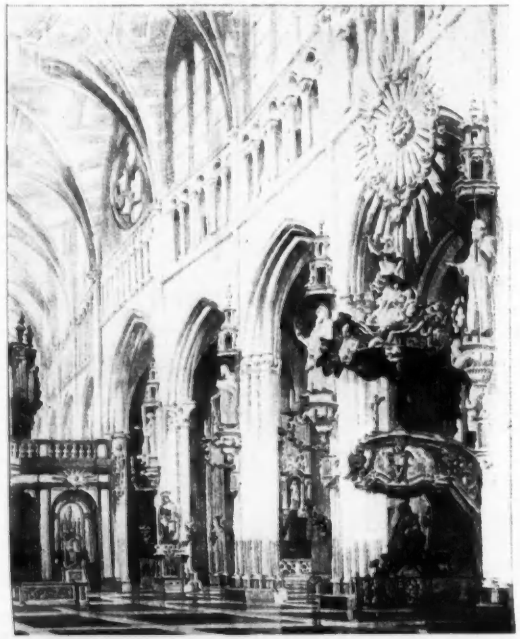
By A. J. Lewes.] (Crayon : 8½″ × 12½″)

Binnenhof, The Hague, Holland.

By E. Maxwell Fry.] (Watercolour : 10¾″ × 7¼″)

"Mingoose," Cornwall.

FORTY-THIRD SESSION



By L. Gardner.]
(Pencil : 13″ × 18″)

Interior of Notre Dame, Bruges.

By E. Maxwell Fry.] (Pencil : 10¼″ × 7¼″)

The Old Customs House, Truro, Cornwall.

[*By W. E. Riley.*
(Watercolour : 10¼″ × 13″)

The Chafford Arms, Fordcombe, Kent.

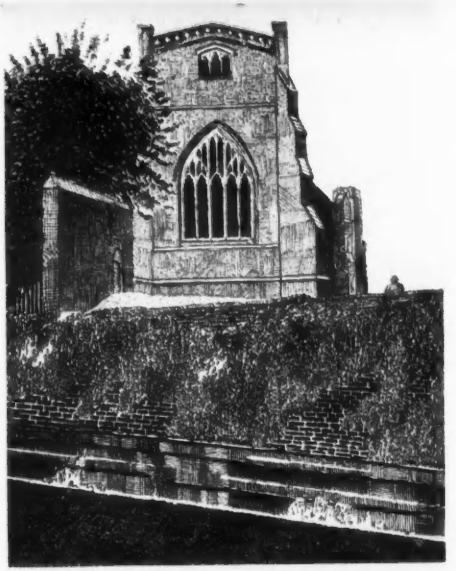
(Pencil : 13″ × 18″)
Interior of Notre Dame, Bruges.

(Watercolour : 10¼″ × 13″)
The Chafford Arms, Fordcombe, Kent.

By H. G. Goddard.] (Pencil : 9¼″ × 12¼″)
The Church, Langton.

By H. G. Goddard.] (Pencil : 8¾″ × 12″)
The Castle Gateway, Leicester.

By Arthur L. Hall.] (Pencil : 5½″ × 8″)
Pump Court, Temple, E.C.



By George Wilde.] (Pen and ink : 8½″ × 11½″)
Christchurch Priory, Christchurch, Hants.

By J. H. Hamilton.] (Pencil : 9″ × 12½″)
The South Porch, Northleach.

By L. Gardner.] (Pencil : 21½″ × 13½″)
Henry VII's Chapel, Westminster Abbey.

By H. G. Leask.] (Watercolour : 5″ × 7″)
Roscrea Castle, Roscrea, Tipperary.

LITERATURE

PLATES OF LETTERING

THE Victoria and Albert Museum have just issued four collotype plates (17 ins. by 12 ins., excluding margins) of Eric Gill's lettering. Two, the alphabets of roman capitals and of the lower-case (roman and italic, and the figures 0–9) are reissues of those in circulation among craftsmen for the last twenty-five years. Here they have been enlarged, with some loss of precision, and in the italic alphabet the lighted and shadowed sides of the "V"-cut are barely distinguishable.

In the new panel of roman capitals, printed in black, red and blue, the same essential forms are preserved, cut with more ease and freedom. Curiously, the most attractive of the four is the brushwork lettering from a painted panel, which shows a supreme mastery of the brush as a "writing" instrument, the more so as the forms follow, more closely than is perhaps theoretically plausible, pen-forms. The practice, however, is beyond criticism except for the mannered (and traditional—but that's no real excuse !) DE and CE (the inscription is in French) where the E is painted within the D, thus making these two unimportant words stand out with startling and absurd emphasis.

J. P. T.

Lettering by Eric Gill. Reproductions from Collotype Plates. Published by the Victoria and Albert Museum, London. Price 8d. each.

APPROXIMATE ESTIMATES

THIS pocket-book for estimating has now reached its sixth edition. It contains measured and prime costs of all building and engineering materials and works used today, as well as much information with regard to military services not to be found in the usual textbooks. The book is arranged in alphabetical order, with each item of the various trades under its own heading. All the prices throughout the book have been carefully revised to accord with the present market prices and rates of wages.

Approximate Estimates. By Colonel T. E. Colman (Staff for Royal Engineer Services). Revised by Clyde Young, F.R.I.B.A. Sixth edition. London: E. and F. N. Spon, Ltd. Price 10s. 6d. net.

ART IN THE LIFE OF MANKIND

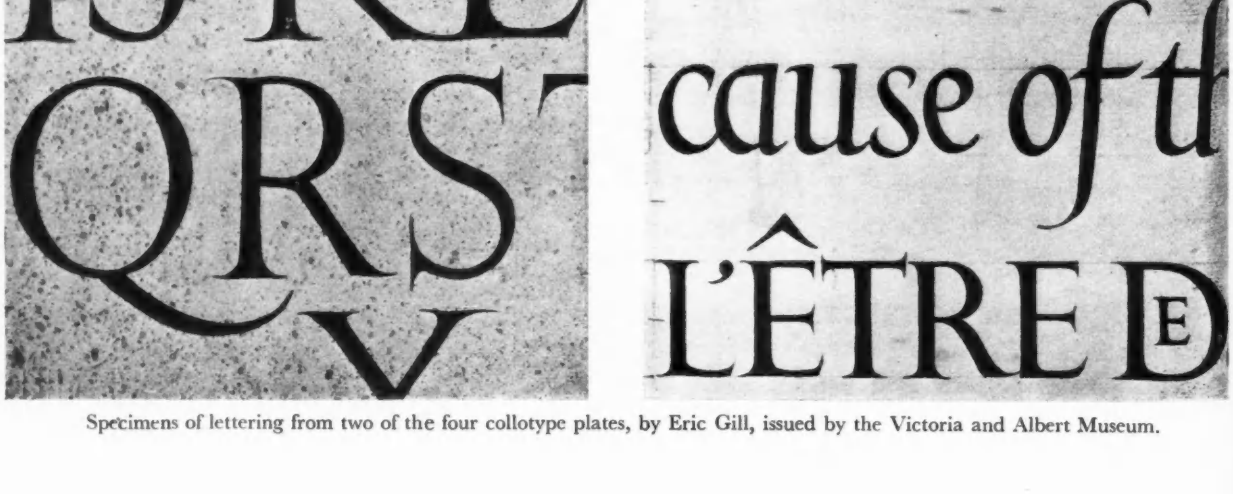
IN these little, well-produced, well-illustrated books, Professor Seaby, of Reading University, has provided a brief survey of two of the most important epochs in the history of art. They are so brief that there is no difficulty in avoiding the impact of the two facts that at once strike the eye.

First, the overwhelming importance of art in the world's history as a record; second, the equally obvious domination of the art of architecture. It is from these brevities that the real significance of art in history emerges. The two hundred pages of these books cover at least two millenia and comprise what we have come to recognize as the great ages of pagan and Early Christian art. From archaic Greek to the merging of Romanesque into Gothic is a wide stretch, not only in art history but in human imagination. There was already in the world great art, the prehistoric, the primitive, Assyrian, Egyptian, yet the Greek seemed to arise of itself, maintain itself throughout a thousand years, and, what is more, to modify the arts with which it was contemporary and to impregnate the succeeding era.

It has, moreover, more profoundly affected all manifestations of the urge to art in all subsequent periods than any other. In point of fact, it has probably had so profound an effect that it has seriously delayed the later evolution of art. The Renaissance paraded the Greek forms, if not the Greek spirit, after Gothic had so nobly striven for freedom. So successfully did it accomplish the classical revival that its influence still persists. We are Greek today and it would seem that only science will liberate us. Greek art is not scientific. Greek architectural structure is stone placed on stone in magnificent form and with a richness of decoration which in its pure beauty has never been equalled. Roman architectural structure was scientific; it developed the arch and made the best use of concrete.

The most noble union of art and science is found in the further development of the arch, the buttress, and the human motive in Gothic. In Greek architecture, sculpture and drawing, however, pure form holds sway throughout. There was representation, but its realism was modified by an aloof and dignified abstraction which has dominated representative art ever since; abstraction of pure beauty in recognizable human forms.

Roman art was not only imitative, but in the secondary degree it actually copied Greek. Its decorative work, figure and geometrical, is not original in form, and only in its extension of realism in the domain of portraiture did it assert an individualistic direction and scheme. In this it was distinctive,



Specimens of lettering from two of the four collotype plates, by Eric Gill, issued by the Victoria and Albert Museum.

sufficiently so as to place upon all future work the mark of the Roman—a mark which almost all the portrait busts of today still bear. All the further influences which radiate from Roman and Romanesque art during its thousand years are dealt with by the author, who includes useful chapters on Early Christian Byzantine, Sasanian, Coptic and Scandinavian manifestations.

Perhaps the most useful feature of the work is that it is so compact as to make possible a simple orientation of these two great phases with the further phases of the world's art.

KINETON PARKES

Art in the Life of Mankind. By Allen W. Seaby. Vol. iii: *Greek Art and Its Influence*; vol. iv: *Roman Art and Its Influence.* London: B. T. Batsford, Ltd. Price 5s. each.

SOCIETIES AND INSTITUTIONS

R.I.B.A. ELECTION OF MEMBERS

AT a recent meeting of the R.I.B.A. Council, the following members were elected:

As Hon. Corresponding Members (2)

Rerrich, A.
Walker, C. H.

As Fellows (28)

Adams, J.
Adams, J. B.
Anderson, H.
Ashendon, H. C.
Bladon, J. E.
Bray, A. G.
Cresswell, J. J.
Dagliesh, K.
Denman, S.
Dowdeswell, F.
Drewitt, F. G.
Emberton, J.
Etchells, F.
Frank, L. B.
Gill, L. M.
Hughes, J. O'H.
Jackson, J. P.
King, W. J.
Leverkus (Miss) G. W. M.
Martin, C. F.
Mawhood, W.
Moore, W. E.
Ranger, E.
Robinson, A. D.
Stewart, J.
Suttcliffe, B. L.
Taylor, J.
Ventners, J. M.

As Associates (104)

Abbott, D. N.
Adam, W.
Adkins, F. W. C.
Aldridge, R. De W.
Ambdekar, V. N.
Ashwell, H. J.
Barry, D. E.
Bell, B. M.
Benson, C. A.
Best, N.
Bomer, E. D. N.
Booth, L. N.
Bramhill, H.
Broughton, F. H.
Brown, L. L.
Bruer, L. G.
Cairns, J. B.
Cardwell, J. J.
Caröe, A. D. R.
Chard, F. V. S.
Clark, A. R.
Collie, R. A.
Connolly, H.
Cowley, R. H.
Cox, F. R.
Crickmay, H. W.
Crispin, B. A.
Dawbarn, C. Y.
Devereux, A. H.
Drury (Miss), E.
Drury (Miss), J. R.
Dry, T. J.
Dyer, H. T.
Edgar, N.
Fancott, W. E.
Farrow, J. W.
Fisher, N. C.
Fisher, R. C.
Fogden, J.
Franklin, H. J.
Furbur, E. R.
Gardham, H. E.
Goldsmith, H. H.
Hall, A. L.
Harris, L. D.
Harrison, R. H.
Hartland, E. J.
Hawker, J. B.
Hoar, H. F.
Hobbs, G. B.
Honeywell, F. W.
Hughes, H. G.
Hughes, J.
Lindsay, R. G.
Long, A. E.
M'Intyre, D.
McWilliams, H. H.
Marlow, A. F.
Marwick, T. W.
Massey, E. F.
Mileson, H.
Mitchell, A. H.
Mitchell, C. M. F.
Moffat, J. B.
Mollison, W.
Moore, H. W.
Moore, S. S.
Morris, R. S.
Murison, F.
Needham, J.
Neil, N. A. G.
Nisbet, J. V.
Nunn, A. V.
Osburn, W. J. A.
Paterson, D. S.
Paterson, L. D.
Pickering, C. E.
Pittaway, H.
Potter, J. E.
Powell, L. C.
Powell, M. H.
Reuben, S. S.
Richards, J. M.
Salvin, T. E.
Sargent, H. L.
Scott, J.
Scott, R. D.
Seel, E.
Sirotkin, Z.
Stewart, D. A.
Stokes, D. D. S.
Sully, C. W.
Taylor, F. B.
Thatcher, C. A. E.
Thompson, J. S.
Twentyman, A. R.
Turnbull, E.
Underhill, A.
Valder, W.
Wardle, L. T.
Williams, W. R.
Wingate, J. W. C.
Woods, H. J.
Wright, J. H.

As Licentiates (54)

Archibald, J.
Beresford, A. E.
Billson, L. E.
Bond, C.
Brocklehurst, R. G.
Callaghan, A.
Cargill, C. F.
Cattlin, O.
Chalk, B.
Clark, R. C.
Clarke, H.
Cutlar, R. A.
Dyson, A. L.
Edwards, E. H.
Gallaher, H. L.
Garrood, H. St. C.
Geall, P. D.
Gibson, W. M.
Gilbert, F.
Gold, A. S.
Goodman, S. V.
Gray, C. W.
Gulliford, S. A.
Hall, J. N.
Halley, W. B.
Hawkins, R. E.
Houlton, A. W.
Hughes, A.
Jackson, L. G.
Johnson, A. J.
Lobban, A. V.
MacLaughlin, H. A.
Maitland, J. S.
Manning, R. D.
May, E. W.
Mill, R. R.
Newton, E. A.
Nicholls, W. B.
Peto, A. N.
Popplewell, J. W.
Powell, L.
Pride, F.
Rason, A. R.
Rutherford, T.
Sadleir, R. J.
Shea, F. M.
Stanham, A. F. G.
Stevenson, J. C.
Taylor, A. G.
Trent, W. E.
Ward, F. D.
Wildin, E. G.
Williams, D. C.
Wise, D. G.

R.I.B.A. PAMPHLET

The 1931–1932 edition of the R.I.B.A. pamphlet *Membership of the R.I.B.A.* has just been published. Copies may be obtained from the Secretary, R.I.B.A., price 1s. each, exclusive of postage.

The pamphlet, in addition to information regarding the examinations and membership of the R.I.B.A., contains full particulars with regard to architectural training, scholarships available at the schools of architecture recognized for exemption from the R.I.B.A. examinations, and a selected list of books on architectural subjects, etc. Maps showing the local distribution of facilities available for architectural education in England, Wales, Scotland and Ireland, are an important feature of the pamphlet. These maps are accompanied by lists of schools throughout the countries and by a schedule showing the local distribution of facilities. This schedule gives the R.I.B.A. allied societies and their provinces, and states the educational facilities available in the area of each allied society.

BIRMINGHAM ARCHITECTURAL ASSOCIATION

Mr. H. S. Goodhart-Rendel, F.R.I.B.A., lecturing on "The Use of Precedent" at a meeting of the Birmingham Architectural Association, held on December 4, said the domestic architecture of England today appeared to divide into three currents, which he would caricature by calling them the stark, the safe and the winsome. The stark scorned precedent; the safe was greatly indebted to Georgian tradition, reimposed upon it when mid-Victorian ideals faded; the winsome, with its waney weather-boarding and its weeny windows, its crookity-nookity planning and its lovesome little gardens would, he imagined, go on its silly way until there were no more beaches and golf courses to afford it frontage. Its use of precedent was extensive but capricious.

Church architecture nowadays was usually cheap and seldom Gothic. When it was Gothic, or alleged to be so, it redeveloped, in the hands of all but a very few, the crude incompetence shown in the earlier days of the Gothic Revival. The painfully-acquired technique that flowered in such works as the churches in Birmingham by Pearson and Mr. Bidlake had disappeared as though it had never been. With some distinguished exceptions, the pseudo-Romanesque stuff now in vogue seemed to him of no architectural value at all.

A problem of restoration might make an architect something of a copyist, a complication of sentiment might make him an eclectic, his own good schooling might make him in principle an academic, and the necessities of these days must make him a modernist. And in each of these capacities he would have some use for precedent.

In suggesting what that use should be, the lecturer said an architect should never copy in architecture unless he was forced to. Should an architect decide to make an eclectic architectural language in which to express himself, it must be a clear, unequivocal language, free from ready-made phrases and used with absolute logic and consistency. He could often be prudent in risking the accusation of academicism and in taking his language from tradition and authority, provided he did not lose his freedom of self-expression. In doing so he would not forfeit his claim to be a modernist, since new problems called for new combinations that developed themselves into the only kind of new forms that had ever had any real currency or value in their art.

It was better for architects today to keep to their particular problem of giving a soul to the uncouth body of modern engineering than to set their faltering feet in the path up which the

giants of other days made such splendid progress. But it was also good to look back to the triumphs of the past to see what perfection could be.

Mr. J. B. Surman, F.R.I.B.A., presided.

NORFOLK AND NORWICH ASSOCIATION OF ARCHITECTS

"What is Architecture?" was the title of a lecture delivered by Mr. Robert Atkinson, F.R.I.B.A., at a meeting of the above Association, held at Norwich on December 4. Mr. Basil Cozens-Hardy presided.

There were, said Mr. Atkinson, many important buildings which were overdone in design. They were so overelaborated and broken up that in the aggregate they were objectionable. In a general way, however, the public were not deceived. They were never enthusiastic, for instance, on the Gothic revival. What they wanted to see was a building which fulfilled its modern functions. Modern things, such as aeroplanes and great engines and great liners were intensely interesting, and he thought the public expected a development along these lines from the architect. They were quite willing to accept modernity if it was reasonable and good and a development of the function of the building. He thought the present tendency in architecture was to make the bulk of the work simple and to concentrate upon a few very, very, fine things which would have the greater effect because of their contrast with the simplicity of the background.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Stephen Simpson presided at a meeting of associate members of the above Society, held at the Leeds College of Art on November 26, when Mr. F. F. Johnson, the winner of the Society's travelling studentship, gave his impressions of Vienna and Prague.

The speaker remarked that, apart from the churches of Vienna, which showed the characteristic faults of German Gothic, by far the most interesting feature of the city was its Baroque architecture. There were, owing to the formerly unsettled state of the country, few examples of the earlier Renaissance. Baroque was the plaything, not of the Emperor, but of his courtiers, who had made Vienna a city of palaces; though there was one church, St. Peter's, built about 1722, which was a charming example of Baroque.

Very little had been heard about the architecture of Prague, though, to the speaker's mind, it was a more romantic city than Vienna. Nowadays, it was simply rampant with architectural experiment which was ruining the aspect of the city. The square of St. Wenceslaus showed a terrible gamut of architectural styles, and had now only one of its old Baroque palaces remaining as a pathetic reminder of a more cultured past. Most of the new work showed a marked departure from Continental traditions in the sense that the sliding sash had almost ousted the double casement. Plate-glass was the rage in Prague—huge, desolate sheets of it, shorn of any subdivisions.

Short papers on their travels in France and Italy were afterwards given by Messrs. A. Tattersfield and W. Bailey, winners of William Nicholson travelling scholarships, controlled by the Society.

ARCHITECTURAL LIGHTING

The seventh and last lecture of the Faraday Illumination Design Course was given by Mr. W. Maitland, A.R.I.B.A., at the E.L.M.A. Lighting Service Bureau on November 23.

The lecturer said the development of lighting during the past two years showed a definite elimination of point sources and a tendency towards the illumination of large interiors. This was made possible by the modern lamp, the absence of fire risk, remote control and comparative cheapness. Architects had, therefore, seized the opportunity of incorporating in their buildings light sources which had a definite relationship to their design. The engineer, as a result, had found himself faced with the task of setting aside lighting in terms of foot candles only, and was now obliged to consider quality of light at least as much as quantity. Today he must be thoroughly conversant with the different diffusing and reflecting materials, and be able to inform the architect of the position of the light sources, so that the desired effects required by the architect were fulfilled.

FACULTY OF ARCHITECTS' AND SURVEYORS' ANNUAL DINNER

The fifth annual dinner of the Faculty of Architects and Surveyors was held at the Hotel Metropole, Northumberland Avenue, W.C., on Friday last. About 200 members and guests were present.

Sir Charles Allom, F.R.S.A. (President), in reply to the toast of the "Faculty of Architects and Surveyors," proposed by Sir William Arbuthnot Lane, Bart., after stating that the Association now comprised about 1,200 members, said we suffered at the present time from building bylaws, local Acts, etc., which were not up to date in many respects and interfered with the creation of new methods which he more strongly advocated than he did new architecture. He hoped that in the near future legislation would be passed to enable new methods to be adopted. Architects of today would be wise to get away from the old customs set by architects of the past. Britain had yet to show that it had contributed its share to the architecture of the future.

The toast "Our Guests and Kindred Societies" was proposed and responded to by Mr. E. F. Harmer (Past President) and Mr. Harry Stanger, A.M.INST.C.E., respectively. Other speakers included Sir Clement Kinloch-Cooke, M.P., Captain Montague Evans, F.S.I., and Mrs. W. P. Reynolds.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Lords and Commons Adjourn

BOTH Houses adjourned for the Christmas Recess on December 11, and will reassemble on February 2, 1932.

Valuation and the Land Tax

Mr. Chamberlain, the Chancellor of the Exchequer, announced that the valuation under the land tax scheme was to be suspended.

The total cost of the valuation, he said, was estimated at from £1,000,000 to £1,500,000. A certain amount of money had already been spent, but the great bulk of the expenditure was still to come. In the meantime, the need for economy had become paramount, and the Government felt that, in present financial conditions, they would not be justified in incurring further expenditure on an object which, in any case, could not produce any return for a considerable time. Without prejudice to the merits of the scheme, which had not been under consideration, the Government therefore purposed to suspend the work.

Proposed Statue of Lord Haig

Brigadier-General Nation asked the First Commissioner of Works if he would state what the present position was regarding the proposed statue of Lord Haig that was to be erected in London; what was the total estimated cost; and what proportion of this sum had been spent up to date.

Mr. Ormsby-Gore said that Mr. Hardiman, the sculptor, was now engaged on the full-size figure: the total estimated cost of the statue, excluding the foundations, but including the fees paid to the unsuccessful competitors, was £9,000: the amount paid to Mr. Hardiman to date was £2,150.

Montagu House Site

Sir Vivian Henderson asked the estimated cost of the erection of the new block of Government buildings it was proposed to erect on the Montagu House site; and the total annual rental paid for accommodation hired for Government staffs which it was

intended to house in this new building.

Mr. Ormsby-Gore said that the estimated cost of the erection of the new block of Government buildings, which it was proposed to erect on the site of Whitehall Gardens and Montagu House was £2,215,000. The total annual rental at present paid for hired premises, which would be vacated on completion of the new building, was £144,062. In addition, Government property of an annual value of £22,168 would be available for disposal.

The Subsidy Council House

Captain Erskine-Bolst asked the Minister of Health if he could give the present cost of construction of the average subsidy council house, with parlour and without, at the present time as compared with the corresponding period for each of the last three years; whether he could state the cheapest type of house which had been erected at an economic rate; and whether, in view of the still existing shortage of houses, he could bring to the notice of other local authorities the full facts of cheap construction in this particular case.

Sir E. Hilton Young said that the following statement showed the average cost of non-parlour and parlour houses (excluding flats and small houses for aged persons) in contracts let by, or in direct labour schemes of, local authorities (other than the London County Council).

Year ended December 31	Cost of building, exclusive of land, roads and sewers	
	Non-parlour houses	Parlour houses
	£	£
1927	413	481
1928	361	429
1929	344	409
1930	339	404

He was not certain to what type of house his hon. friend referred as having been erected at an economic rate, but he was always willing to investigate economics in building and would in suitable cases bring any particular building methods to the notice of all local authorities who might be assisted thereby.

Unemployed in Building Industry

Sir H. Betterton, the Minister of Labour, informed Mr. McGovern that the number of insured persons in the building industry recorded as unemployed on October 26, 1931, the latest date for which statistics of unemployed by industries were available, was 205,219. Accounts were not kept of benefit or transitional payments paid in separate trades but, assuming that the average rates for men and boys applied to this trade, the approximate total cost would be £175,000 for the week.

Housing (Rural Workers) Act, 1931

Replying to several questions as to what progress had been made under the powers under the Housing (Rural Authorities) Act, 1931, Sir E. Hilton Young said that the Committee appointed under the Act held a meeting in September. Applications had been received from 136 rural district councils in respect of 7,003 houses, and were under investigation, but they had not yet been considered by the Committee, and none had yet been approved.

Dwellings Converted to Industrial Use

Major Nathan asked the Minister whether he was aware of the increase in overcrowding in the East End of London, caused by the diversion of dwelling-houses to industrial purposes; and whether he proposed to take any action to prevent such diversion in the future.

Sir E. Hilton Young said that he was aware that a number of dwellings had been converted to industrial use. Control over development of this kind could best be secured by legislation for extending planning powers to built-up areas, and the question of such legislation was under consideration.

COMPETITIONS OPEN

December 31.—Sending-in day. Latest date for conditions was September 30. Proposed New Town Hall and Municipal Buildings, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions were obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost: £1,000 or less) for the Incorporated Association of Architects and Surveyors. Premiums: 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

THE ARCHITECTS' DIARY

WEDNESDAY, DECEMBER 16

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Pantomime, 8.15 p.m. Also Exhibition of photographs and drawings of Russia's new buildings. Until December 18. **8.15 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Churches and Later Palaces of France." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

CHARTERED SURVEYORS INSTITUTION. Annual dinner of the quantity surveyor members, to be held at the Hotel Victoria, Northumberland Avenue, W.C.2. **7.30 p.m.**

SOCIETY OF WOOD ENGRAVERS. At the Redfern Gallery, Arcade House, 27 Old Bond Street, W.1, Twelfth Annual Exhibition. Until January 2. 10 a.m. to 6 p.m. (Saturdays, 10 a.m. to 1 p.m.). **10 a.m.**

THURSDAY, DECEMBER 17

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Pantomime. **8.15 p.m.**

THANET SCHOOLS OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Elizabethan England." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, DECEMBER 18

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. "The Portent of Concrete." By Sir E. Owen Williams, K.B.E. **5 p.m.**

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Elizabethan England." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, DECEMBER 19

Sunrise, 8.1 a.m. Sunset, 3.52 p.m.

INSTITUTION OF CIVIL ENGINEERS. Students (after noon) visit to the Southgate extension of the Under ground Railway.

SATURDAY, DECEMBER 26

Sunrise, 8.5. a.m. Sunset, 3.56 p.m.

MONDAY, DECEMBER 28

R.I.B.A., 9 Conduit Street, W.1. First of three Christmas holiday lectures for boys and girls. "Houses of the Ancients." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

WEDNESDAY, DECEMBER 30

R.I.B.A., 9 Conduit Street, W.1. Second of three Christmas holiday lectures for boys and girls. "Mediæval and Renaissance Houses." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

FRIDAY, JANUARY 1, 1932

R.I.B.A., 9 Conduit Street, W.1. Last of three Christmas holiday lectures for boys and girls. "Houses of the Moderns." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

SATURDAY, JANUARY 2

Sunrise, 8.6 a.m. Sunset, 4.2 p.m.

MONDAY, JANUARY 4

R.I.B.A., 9 Conduit Street, W.1. Award of prizes and studentships. Criticism by E. Berry Webber, A.R.I.B.A., on work submitted. **8 p.m.**

WEDNESDAY, JANUARY 6

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "German Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 7

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "The Future of Domestic Decoration." By C. O. Masters.

SATURDAY, JANUARY 9

Sunrise, 8.4 a.m. Sunset, 4.10 p.m.

MONDAY, JANUARY 11

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The A.A. Excursion to Austria, 1931." By Grahame B. Tubbs, A.R.I.B.A. Also exhibition of photographs of buildings visited on the excursion. Until January 22. **8 p.m.**

WEDNESDAY, JANUARY 13

MANCHESTER SOCIETY OF ARCHITECTURE. "Rational Architecture." By Joseph Emberton, F.R.I.B.A. **6.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Housing on the Continent." By L. H. Keay, F.R.I.B.A. **6 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Belgian and Dutch Renaissance." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 14

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, JANUARY 15

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, JANUARY 16

Sunrise, 8.0 a.m. Sunset, 4.20 p.m.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Visit (afternoon) to the Tower of London.

LAW REPORT

ARCHITECT'S CLAIM FOR FEES

Payne v. *Marshall. Official Referee's Court. Before Sir William Hansell, K.C.*

THE Official Referee sat to ascertain the sum due to Mr. Edward Harding Payne, A.R.I.B.A., of John Street, Bedford Row, from Mr. G. E. Marshall, of Raymond's Buildings, Gray's Inn, in respect of services rendered by him to Mr. Marshall between 1922 and 1928.

For the plaintiff it was pleaded that he allowed the defendant to use his office on condition that he paid half the amount of any services the plaintiff rendered. Plaintiff claimed for services he rendered the defendant in connection with a building in Cheapside and with certain greyhound racing tracks at Brighton.

Defendant, by his defence, denied that any services were rendered in connection with the racing tracks. He also pleaded that they assisted each other gratuitously, and that the plaintiff had been paid sufficient for anything he had done.

Sir William Coventry, K.C., for plaintiff, said the defendant, when he met the plaintiff, was a builder in Liverpool and was anxious to practise in London as an architect. Plaintiff did a considerable amount of work in connection with the racing tracks.

The Official Referee assessed the damages at £37, which he held was due to plaintiff from defendant.

Judgment accordingly.

TRADE NOTES

Messrs. William Newman and Sons, Ltd., of Hospital Street, Birmingham, have just issued a pamphlet illustrating and describing one of their latest devices for the silent closing of doors. This new patent is entirely British in conception, design, etc., and has been named the Vanguard spring hinge and check hinge. An illustration is reproduced on this page, from which it will be seen that when fixed it is most inconspicuous, and does not detract in any way from the appearance of the door or its surrounding architectural details. This is only one of the advantages claimed for this device, another being the extreme ease of fixing; just the cutting away of a little woodwork, without cutting into the floor itself and subsequent levelling and making up. The fact that the Vanguard spring and check is fixed in the same position as ordinary butt hinges means that they will never be troubled or damaged by water when floor cleaning is in progress. The Vanguard assumes complete control of the door immediately it is released, owing to the powerful spring, which is curbed in action by the patent hydraulic check, with the result that the door closes into position without noise. Any size of single-action door can be adequately controlled by varying the number of springs used in conjunction with one check, and each spring and check is adjustable. Messrs. William Newman and Sons, Ltd., are also manufacturers of all types of door springs and checks, panic bolts, window-opening gear, and best-class builders' brassfoundry. Amongst their specialities are fittings for doors and windows in brass, bronze, Birmabright, Monel, Silveroid, and stainless steel.

*

An illustrated booklet has recently been published by the British Steelwork Association, entitled *Steel and the Attendant Industries*, in which are described the processes by which steel girders are made and other subsidiary processes involved in steel manufacture. The text is admirably written, and is lavishly illustrated by numerous photographs. The booklet is obtainable from the British Steelwork Association, Artillery House, Westminster, S.W.1.

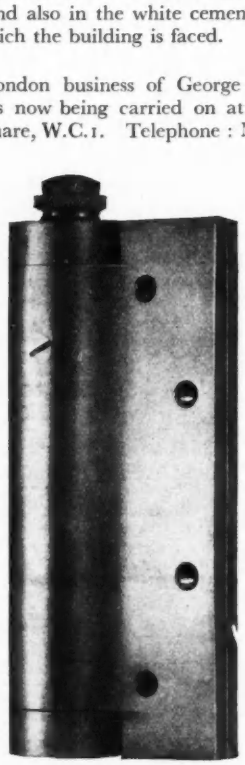
*

It is interesting to note that Messrs. James H. Lamont & Co., Ltd.'s Securex patent fittings for copper tubes will be used exclusively for cold and hot-water supply in the Cumberland Hotel, London. This hotel will have 1,000 bedrooms, each with its own bath and wash-hand basin, with hot and cold water.

*

In the list of sub-contractors for the Maternity Home at Oxford, illustrated in THE ARCHITECTS' JOURNAL for December 9, the name of Messrs. Kerner-Greenwood & Co., Ltd., was inadvertently omitted. This firm's 'Pudlo' brand cement waterproofer was used to waterproof the white cement facings to the whole of the artificial stonework, and also in the white cement stucco with which the building is faced.

The London business of George Parnall & Co. is now being carried on at 4 Bedford Square, W.C.1. Telephone: Museum 7101.



Vanguard spring hinge and check hinge.

A.R.P. STUDIOS

Following are the names of the general contractors and some of the sub-contractors for the Associated Radio Pictures Studios, Ealing Green, illustrated on pages 792, 795–8 of this issue:

General contractors: C. Miskin and Sons, Ltd. Sub-contractors: Horseley Bridge and Engineering Co., Ltd., and Fleming Bros., Ltd., steelwork; Gorford Bros., Ltd., heating and ventilation, canteen service and equipment; Boulton and Paul, Ltd., rehearsal hall and canteen building; Parry & Co., Ltd., roads; H. W. Cullum & Co., Ltd., Absorbit, Ltd., and Heat and Sound Insulation, Ltd., acoustical treatment of studio, projection theatre, etc.; Heat and Sound Insulation, Ltd., thatchboard roof construction and thatchboard insulation of studio walls; Christie and Grey, Ltd., insulation of electrical oil engines; Absorbit, Ltd., insulation of roads and mill machinery; Clarke and Vigilant Sprinklers, Ltd., sprinklers and fire appliances; W. James & Co., Ltd., and Crittall Manufacturing Co., Ltd., windows; Luxfer, Ltd., patent glazing, skylights, etc.; F. A. Norris & Co., Ltd., iron ladders and staircases; Herbert Morris, Ltd., overhead travelling crane; F. Burkitt, Ltd., rising and falling door construction; Marryat and Scott, Ltd., electric locks for studio doors; D. Anderson and Son, Ltd., roofing felt; British Trolley Track Co., Ltd., ball-bearing gearing for garage doors; T. C. Jones & Co., Ltd., chequer plate covers; Bayliss, Jones and Bayliss, Ltd., gates and railings; Walter Cassey, Ltd., door furniture; Kingsmill Art Metal Co., balustrade and handrail; Martin Van Straaten & Co., tiling; J. R. Venning & Co., Ltd., sanitary fittings; Nash and Hull, Ltd., lettering; Ragusa Asphalte Paving Co., Ltd., asphalt; Standard Insulator Co., Ltd., rubber flooring; Siegwart Fireproof Floor Co., Ltd., fireproof floors; Maple & Co., Ltd., furnishings, chairs, carpets, etc.; H. N. Barnes, Ltd., snack counter in canteen; Central Joinery Co. (1927), Ltd., panelling in projection theatre, canteen tables and other fitments; Jarvis & Co., hairdresser's basin; Galliers, Ltd., lighting fittings; J. E. Pinder & Co., scene painter's frame. Electrical work (carried out to the instructions and under the supervision of Mr. S. G. Double, Chief Engineer, A.R.P. Studios, Ltd.): Donovon & Co., studio accessories; Hewittet & Co., rectifier equipment; Duncan Watson (Electrical Engineers), Ltd., transformers; Park Royal Engineering Co., Ltd., studio equipment; Korting and Mathiesen Electrical, Ltd., General Electric Co., Ltd., and British Thomson-Houston Co., Ltd., lamps; Glovers Bros. (Mossley), Ltd., and Pirelli, Ltd., cables; M. E. Cable Co., sound equipment; Kartret Switchgear Co., Ltd., switchgear; Ruston and Hornsby, Ltd., oil engines; J. Sagar & Co., Ltd., mill machinery; British Petroleum Co., Ltd., fuel; Alex. Duckham & Co., Ltd., lubricating oil; Kershaw Projector Co., projection.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed by the CAMBERWELL B.C.: Garages, rear of 83 Queen's Road, for Messrs. Pearsons; extensions, 24–25 Addington Square, for Messrs. Paish, Tyler and Crump; premises, Thurlow Park Road, for Mr. T. H. Hudson.

The FINSBURY B.C. is acquiring a large site in Cyrus Street, for a housing scheme.

SOUTHERN COUNTIES

The BRIGHTON Corporation is to erect an electricity sub-station in Orchard Gardens, Hove.

The BRIGHTON Corporation is to erect twelve shops on the cleared area at Carlton Hill.

The BRIGHTON Corporation is to extend the water supply and erect a pumping station at Balsdean, at a cost of £108,950, in accordance with a scheme prepared by Dr. Herbert Lapworth. The work is to be spread over a period of four years.

Messrs. Thomas Tilling, Ltd., are to erect a bus garage in Whitehawk Road, BRIGHTON.

Mr. G. Ferguson is to develop a building estate of seventy-five acres of land at the north of Ladies' Mile Road, Patcham, BRIGHTON.

Messrs. Braybons, Ltd., are to erect houses in blocks of eight on the Bevendean estate, BRIGHTON.

The BRIGHTON Corporation has agreed upon the layout of the Whitehawk estate, provision being made for 129 houses and shops.

Plans passed by the BRIGHTON Corporation: Thirteen houses, Downs View Avenue, Woodingdean, for Mr. W. H. Clark; house, Withdean Grove, for Mr. R. S. Newman; house, Varndean Gardens, for Mr. H. B. Dixon; stockroom, 38–39 Devonshire Place, for Messrs. Barclay and Sons, Ltd.; reconstruction, 195–199 Western Road, for Brighton Corporation; extensions to showrooms, 35–36 North Street, for Mr. W. H. Vokins; bungalow, Rosebery Avenue, Woodingdean, for Mr. W. D. Reading; twenty-two houses, Widdicombe Way, for Messrs. Braybons, Ltd.; reconstruction, "King and Queen" hotel, Marlborough Place, for Messrs. Edlins, Ltd.; dining-room, etc., 148 Dyke Road Drive, for Tamplin and Sons Brewery, Ltd.; four houses, Princes Terrace, for Mr. J. W. Holloway; garage, alterations and additions, 20–23 Middle Street and 66–68 West Street, for Mr. Basil D. Pinfold; two houses, Hertford Road, for Mr. J. A. Morley; alterations, 159–160 Lewes Road, for Mr. A. S. Tilley.

Plans passed by the DARTFORD U.D.C.: Eighteen houses, Brent estate, for Mr. W. F. Summers; bread store, Lowfield Street, for Popples Bakery, Ltd.; additions, 36 Heath Street, for Messrs. H. and J. Stanford; four bungalows, Beaconsfield Road, for Messrs. Wingrove & Co.; locomotive shed, Long Reach, for Messrs. W. Cory and Son, Ltd.; house, Fairway Drive, for Mr. L. Fuller; two houses, Knowle Road, for Messrs. H. C. Wright & Co., Ltd.; store and workshop, Bulls Head Yard, for Messrs. S. and H. Salway.

The DARTFORD U.D.C. is to provide electricity showrooms in High Street.

The DARTFORD U.D.C. has obtained sanction for a loan of £36,000 for the erection of 128 houses at the Heath estate.

Plans passed by the EASTBOURNE Corporation: Two houses, Park Avenue, for Messrs. Scales and Baker; additions, Eastbourne College, Carlisle Road, for Messrs. Tatchell and Wilson; alterations and additions, 32 Victoria Place, for Messrs. Hillier, Parker, May and Rowden; alterations, Hydro Hotel, Mount Road, for Messrs. G. Bainbridge and Sons; house, Baldwyn Avenue and additions, bakery, Lottbridge Road, for Mr. A. Ford; house, Mill Gap Road, and extensions, 7, 9 and 11 Terminus Road, for Messrs. P. D. Stonham and Son; workshops for British Red Cross Society, Upperton Road, for Mr. F. G. Cooke; parish hall, in connection with proposed new church, Victoria Drive, for Messrs. Stonham and Fenning; three houses, Dacre Road, for Mr. A. J. Fellows.

Plans passed by the GRAVESEND Corporation: House, The Fairway, for Mr. H. L. Smith; two houses, Dennis Road, for Messrs. R. Hopkins and Sons; shop, Wrotham Road, for Mr. T. Bennett; alterations, "Crown" public-house, Peter Street, for Messrs. Charrington & Co., Ltd.; store, for Truman, Hanbury, Buxton & Co., Windmill Street, for Mr. G. E. Clay.

The PORTSMOUTH Corporation has prepared a revised scheme for works at the municipal aerodrome, at a cost of £14,725.

Plans passed by the PORTSMOUTH Corporation: Three blocks of flats, Tangier Road, for Mr. W. Ford; offices and garages, 48–50 George Street, for Portsmouth Builders' Guild, Ltd.; alterations and additions, 10–12 Osborne Road, for Royal Pier and Queen's Hotel, Ltd.; alterations, 68 Albert Road, for Messrs. Freeman, Hardy and Willis; alterations, 14 King's Terrace, for General Accident, Fire and Life Corporation, Ltd.; four houses, Hawthorne Crescent, for Messrs. G. and E. Mitchell; alterations, 16 St. Mary's Road, for Automatic Cream Ices, Ltd.; twelve houses, Chelmsford Road, for Mr. J. McDermott; club-room, Bowler Avenue, for Mr. F. J. Privett; partial reconstruction, Esplanade Hotel, Clarence Esplanade, for Messrs. Brickwood & Co., Ltd.; eleven houses, Northover Road, for Mr. A. A. Carter; shop and showrooms, 117–119 Commercial Road, for Landport Draperv Bazaar, Ltd.; two shops, 69–71 Lake Road, for Messrs. F. H. Jordans, Ltd.; three houses, Winstanley Road, for Messrs. E. and A. Sprigings.

SOUTH-WESTERN] COUNTIES

Mr. H. B. Stride is to erect eight houses in Barrow Hill Road, Shirehampton, BRISTOL.

The BRISTOL Education Committee is purchasing land for improvements at the Newfoundland Road infants' school.

Messrs. William Ash and Sons are to develop an estate at Bedminster, BRISTOL.

Plans passed at POOLE: Two houses, Pembroke Road, for Messrs. Wilkes and Rabbitts; three houses, Walton Road, for Mr. H. V. J. Whiffen; garage and workshop, off Fernside Road, for Mr. G. Jones; house, The Crescent, Hamworthy, for Mr. W. Bartlett; house, Mellstock Road, for Mr. F. W. Spratley; house, Castledene Crescent, house, Wroxham Road, and two houses, Woodlands Avenue, for Mr. C. E. Brewer; house, Hill Road, for Mr. W. H. Cake; house, Surrey Road, for Mr. J. C. Philpotts; house, Wroxham Road, for Messrs. Crabb and Crabb; house, Canford Cliffs, for Mr. J. E. Turner; shop and dwelling-house, corner Dorchester Road and Windfield Avenue, for Mr. H. Kendall; block of four flats and six garages, Princess Road, for Messrs. S. Whitelock & Co.; house, Heather View Road, for Mr. S. G. Ward; house and garage, Branksea Avenue, for Mr. H. Kendall; house, Arley Road, for Mr. R. Thorne; shop and dwelling-house, corner Ashley and Highland Roads, for Messrs. Maggs and Maggs; house, Rosemary Road, for Mr. H. W. Hawkins; house, The Crescent, Hamworthy, for Mr. W. B. Bartlett; two houses, Stanley Green Road, for Mr. R. C. Webber; pair of semi-detached houses, Maple Road, for Mr. A. D. Saunders; two houses, Haskells Road, and house, Good Road, for Mr. N. E. Good; house and garage, Hatherden Avenue, for Mr. K. Wilson; brush factory, Green Road, for Mr. J. Allner; house, corner Grasmere and Panorama Roads, for Mr. H. Kendall; four houses, Decies Road, for Mr. H. V. J. Whiffen; house, Highland Road, for Mr. H. L. Geddes; house, Arley Road, for Mr. G. Berriman; house, Banks Road, for Mr. H. Hunt; house, Highland Road, for Mr. A. Green; house, Maxwell Road, for Mr. R. Thorne.

MIDLAND COUNTIES

The BIRMINGHAM Corporation is to reconstruct the main block of the Selby Oak infirmary, at a cost of £12,000.

The BIRMINGHAM Education Committee is to extend the Paget Road elementary school, at a cost of £25,000.

The BIRMINGHAM Education Committee is to provide additional accommodation at Dolphin Lane council school, at a cost of £5,450.

The trustees of the Kingsthorpe Baptist Church are to erect a church hall and classrooms, etc., in High Street, KINGSTHORPE, Northants.

The NORTHAMPTON Corporation has obtained land for improving the open-air swimming-pool at Millers Meadow.

The NORTHAMPTON Corporation is purchasing further property for clearance in the Grafton Street area.

Plans passed by the NORTHAMPTON Corporation: Two houses, Park Avenue, for Messrs. S. G. Sale & Co.; extensions, Congregational School, Abington Avenue, for trustees; three houses, Delapre Crescent Road, for Messrs. T. Wilson and Son, Ltd.; two houses, Meadway, for Messrs. E. Green and Son; estate development, Kettering Road and Buttocks Booth Lane, for Messrs. Henry Martin, Ltd.

NORTHERN COUNTIES

The BOLTON Education Committee is considering plans, submitted by the Rev. T. McGrath, for the proposed school for St. Ethelbert's to accommodate 400 pupils.

Plans passed by the BOLTON Corporation: Ten houses, Orchard Avenue, for Mr. W. E. Yates; three houses, Crompton Way, for Mr. George Sykes; shop premises, Great Moor Street and Newport Street, for Messrs. T. J. Shannon, Ltd.; offices, Back Settle Street, for Messrs. J. Fletcher, Ltd.; four houses, Kingwood Avenue, for Mr. A. S. Woods; pavilion, Old Kiln Lane, for Hilldane Tennis Club; four houses, Boot Lane, for Mr. J. H. Sharples; house, Belmont Road, for Mr. A. Pilkington.

The BOLTON Corporation is to build four-bedroomed houses and shops on the Cameron Street Estate.

Messrs. S. Robinson and Son, architects, are purchasing land in Lumb Lane, BRADFORD, for building purposes.

The Bradford Watch Committee has approved plans for alterations at the Victoria Palace Picture House, GIRLINGTON.

Messrs. Newsam and Gott are to build houses in Methley Grove and Henconner Lane, LEEDS.

Messrs. Braithwaite and Jackman, architects, are in negotiation with the LEEDS Corporation for the purchase of building sites in York Street and Lupton Avenue.

Plans passed by the YORK Corporation: Additions to premises, Holgate Road and The Mount, for Messrs. Lister and Edmonds; fourteen houses and two shops, Millfield Lane, for Mr. H. Williamson; house, Campleshon Lane, for Mr. E. V. B. Cooper; house, Fifth Avenue, for Bishop of Middlesbrough; almshouses, Shipton Street, for the trustees of Colton's Hospital; house, Hobgate, for Mr. R. E. Watson; four houses, Abbotsford Road, for Messrs. Abbott and Sons; additions, Monk Bar post office, for Messrs. Hutchinson Bros.; additions, 8 New Street, for Leeds Permanent Building Society; four houses, Abbotsford Road, for Mr. F. M. Dixon; additions, 23 High Petergate, for Messrs. Smiths, Gore & Co.; two houses, Temple Lane, Copmanthorpe, for Mr. G. Fairburn; bungalow, Temple Lane, for Mr. W. Wright.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_3	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_3	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester ..	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_3	Gosport ..	S. Counties	1 5	1 0¾
A_3	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_3	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_3	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_3	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_3	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_3	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_3	Southampton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_3	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1¼
A_3	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . . per hour		1	8
Carpenter . . . . . ,,		1	8
Joiner . . . . . ,,		1	8
Machinist . . . . . ,,		1	9
Mason (Banker) . . . . . ,,		1	8
,, (Fixer) . . . . . ,,		1	9
Plumber . . . . . ,,		1	8
Painter . . . . . ,,		1	7
Paperhanger . . . . . ,,		1	8
Glazier . . . . . ,,		1	8
Slater . . . . . ,,		1	8
Scaffolder . . . . . ,,		1	4
Timberman . . . . . ,,		1	4
Navvy . . . . . ,,		1	3
General Labourer . . . . . ,,		1	3
Lorryman . . . . . ,,		1	5½
Crane Driver . . . . . ,,		1	7
Watchman . . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . . . per ton	2	8	6
Blue Lias Lime . . . . . ,,	2	10	6
Hydrated Lime . . . . . ,,	2	16	0
Portland Cement . . . . . ,,	2	6	0
Rapid Hardening Cement . . . ,,	2	13	6
Thames Ballast . . . . . per Y.C.		8	3
¾" Crushed Ballast . . . . ,,		9	6
Building Sand . . . . . ,,		10	0
Washed Sand . . . . . ,,		11	6
2" Broken Brick . . . . . ,,		9	6
¾" ,, ,, ... ,,		12	6
Pan Breeze . . . . . ,,		6	6
Coke Breeze . . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers . . ,,	5	6	7	9
Yard gullies . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . . lb.		6	—	
Gaskin . . . . ,,		5	—	

BRICKLAYER

	£	s.	d.
Flettons . . . . . per M.	3	1	6
Grooved do. . . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . . ,,	27	0	0
Glazed Second Quality, *Less* . .	1	0	0
,, Buffs and Creams, Add .	2	0	0
,, Other Colours ,, . .	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R at Nine Elms :	s.	d.
Portland stone, Whitbed . . F.C.	4	6
,, ,, Basebed . . ,,	4	9
Bath stone . . . . ,,	2	11
York stone . . . . ,,	6	9
,, Sawn templates . . ,,	7	6
,, Paving, 2" . . . F.S	1	8
,, ,, 3" . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) . per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station :			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, ,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . . each		9½	
,, hand-made . . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . . F.C.		2	6
Birch . . . . . as 1" F.S.			9
Deal, Joiner's . . . . ,, ,,			5
,, ,, 2nds . . . ,, ,,			4
Mahogany, Honduras . . . ,, ,,		1	3
,, African . . . ,, ,,		1	1
,, Cuban . . . ,, ,,		2	6
Oak, plain American . . . ,, ,,		1	0
,, Figured ,, . . . ,, ,,		1	3
,, Plain Japanese . . ,, ,,		1	2
,, Figured ,, . . . ,, ,,		1	5
,, Austrian wainscot . . ,, ,,		1	6
,, English ,, . . . ,, ,,		1	11
Pine, Yellow . . . . ,, ,,		1	0
,, Oregon . . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,		1	3
,, Burma . . . ,, ,,		1	2
Walnut, American . . . ,, ,,		2	3
,, French . . . ,, ,,		2	3
Whitewood, American . . ,, ,,		1	1
Deal floorings, ¾" . . . Sq.	1	1	0
,, ⅞" . . . ,,	1	3	6
,, 1" . . . ,,	1	5	6
,, 1¼" . . . ,,	1	11	0
,, 1½" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, ⅞" . . . ,,		17	6
,, 1" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1½" . . . ,,	1	8	0

Plywood, per ft. sup.

Thickness .	⅜"	½"	⅝"	¾"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts :

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . ,,	10	0
,, ,, ½" . . ,,	9	9
,, ,, ⅝" . . ,,	9	6
,, ,, ¾" . . ,,	9	0
,, ,, ⅞" . . ,,	9	0
,, ,, 1" . . ,,	9	0
,, ,, 1¼" . . ,,	9	0
,, ,, 1½" . . ,,	9	0

Cast-iron rain-water pipes of	3" s.	d.	4" s.	d.
ordinary thickness metal . F.R.	7		10	
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets. ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6

Half-round rain-water gutters of	5"	6"
ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	£	s.	d.
Lead, milled sheet . . . cwt.	21	6	
,, drawn pipes . . . ,,	22	0	
,, soil pipe . . . ,,	25	0	
,, scrap . . . . ,,	11	6	
Solder, plumbers' . . . lb.		11	
,, fine do. . . . ,,	1	3	
Copper, sheet . . . ,,	1	0	
,, tubes . . . ,,	1	4	

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£	s.	d.
Lime, chalk . . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.	s.	d.
Sheet glass, 21 oz. . . F.S.				3½
,, ,, 26 oz. . . ,,				4½
Arctic glass . . . ,,				5
Cathedral glass . . ,,				6
Hartley's rough rolled . ,,				9
Do. wired plate . . ,,			1	3
¼" Polished plate, n/e 1 ft. . ,,		7½ to	1	0
,, ,, 2 . . ,,		10 ,,	1	3½
,, ,, 3 . . ,,	1	4½ ,,	1	10
,, ,, 4 . . ,,	1	11 ,,	2	4
,, ,, 6 . . ,,	2	3 ,,	2	7½
,, ,, 8 . . ,,	2	5 ,,	3	0½
,, ,, 12 . . ,,	2	10 ,,	3	3½
,, ,, 20 . . ,,	3	3½ ,,	3	9
,, ,, 45 . . ,,	3	6½ ,,	4	0½
,, ,, 65 . . ,,	3	11½ ,,	4	4
,, ,, 90 . . ,,	4	4 ,,	4	9
,, ,, 100 . . ,,	4	6 ,,	4	11
Vita glass, sheet, n/e 1 . . ,,			1	0
,, ,, ,, 2 . . ,,			1	3
,, ,, ,, over 2 . . ,,			1	9
,, ,, plate, n/e 1 ft. . ,,			1	6
,, ,, ,, 2 . . ,,			3	0
,, ,, ,, 5 . . ,,			4	0
,, ,, ,, 7 . . ,,			5	0
,, ,, ,, 15 . . ,,			6	0
,, ,, ,, over 15 . . ,,			7	6
Putty, linseed oil . . . lb				1

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		2	4
Boiled oil . . . . ,,		2	8
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add "	3 0
If in underpinning	" "	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do., all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
¼" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1¼" " " " "	"	2 7 6
2" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼" do.	"	2 1

CARPENTER AND JOINER—*continued.*		s. d.
1¼" deal moulded sashes of average size	F.S.	2 3
2" " " " "	"	2 6
1¼" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " " "	"	4 6
Extra only for moulded horns	Each	9
1¼" deal four-panel square, both sides, door	F.S.	2 6
2" " " " "	"	3 0
1¼" " but moulded both sides	"	3 0
2" " " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R	1 6
4½" × 3½" " " "	"	2 0
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1¼" deal moulded wall strings	"	2 6
1¼" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1¼" × 1¼" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER		£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 18 0
Do. in flashings	"	2 0 6
Do. in covering to turrets, etc.	"	2 7 6
Do. in soakers	"	1 13 6
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " " "	"	1 7 0
Extra, only for small quadrant angle	F.R.	9

GLAZIER		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper	from "	2 9

MAIN ALTAR AND REREDOS

IN THE NEW CHURCH, AMPLEFORTH ABBEY, YORKS.

[*Sir Giles Gilbert Scott, R.A., Architect.*

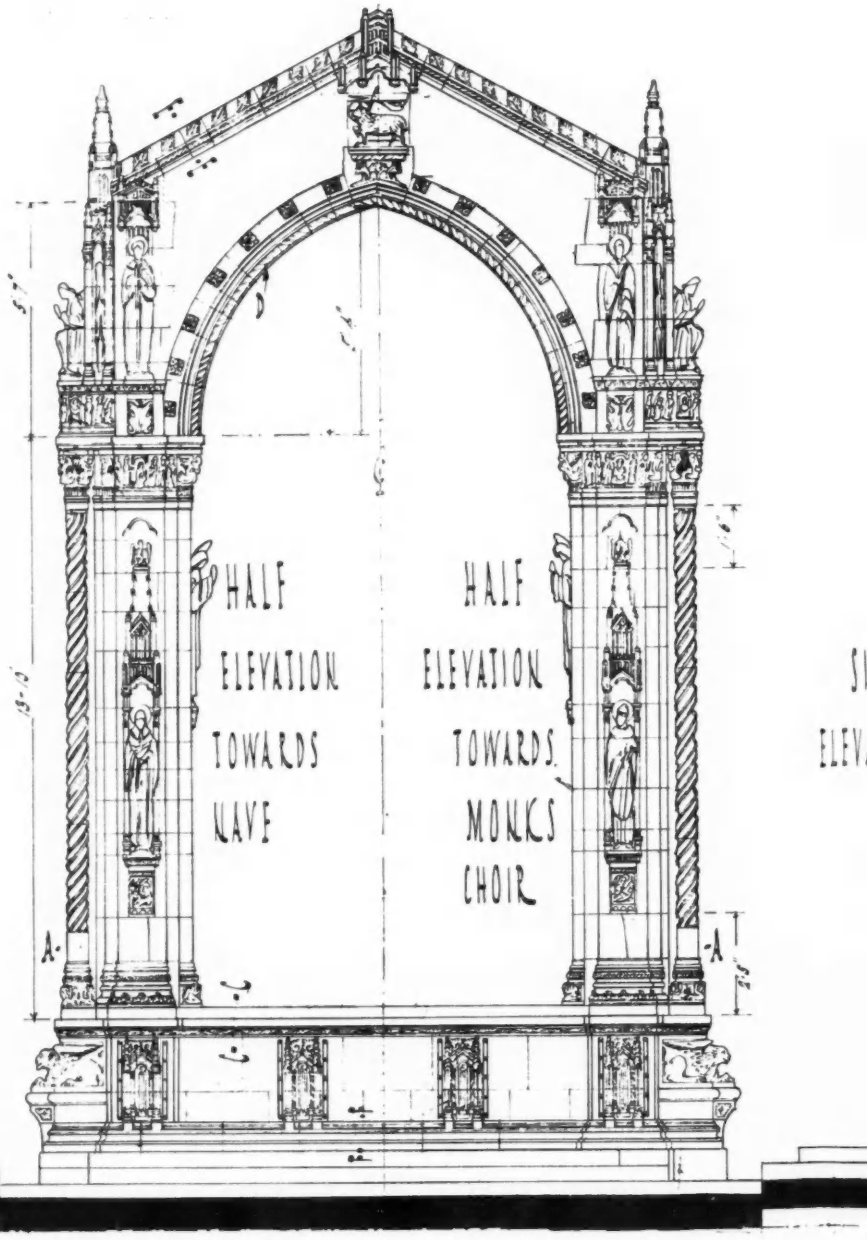
THE VIEW FROM THE RETRO-CHOIR

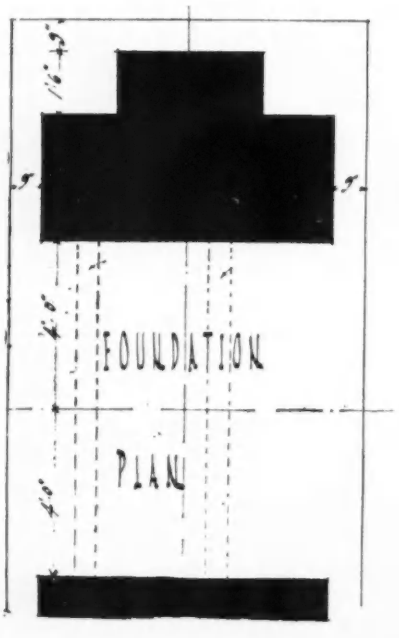
THIS main altar and reredos are not only unusual in architectural treatment, but they occupy an uncommon position in the church. They stand towards the centre of the interior and separate the nave in which the congregation assembles from the retro-choir which is used by the monks. In fact, the position is similar to that occupied by the screen in cathedrals and conventional churches to separate the nave from the choir.

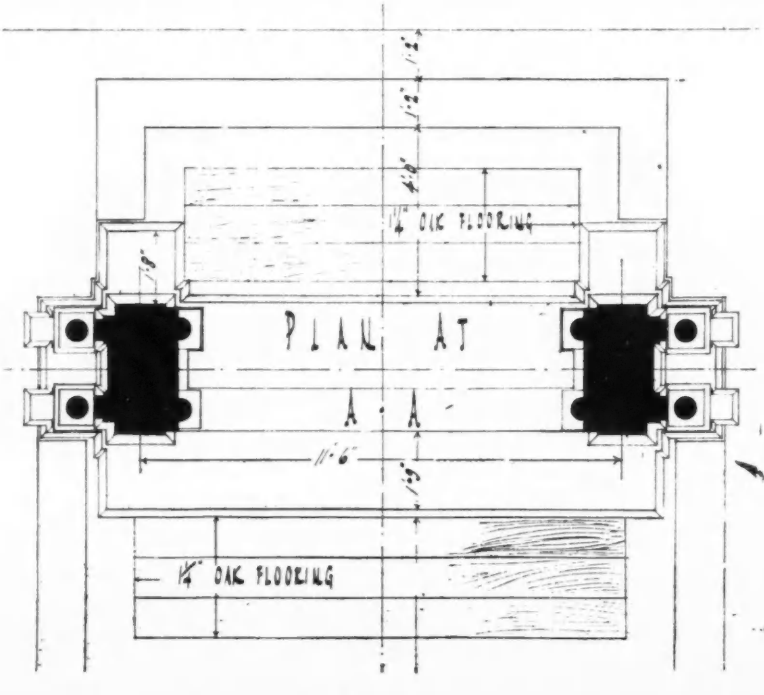
Due to this unusual position, the altar and the reredos have been designed with two faces, one towards the nave and the other towards the retro-choir, so that services can be conducted in either direction.

The stone is blue Hornton, and has been carved by William D. Gough, the sculptor. Wide cream-coloured flush jointing has been adopted. The front of the wood cross facing the monks' side is painted, and that facing the congregation is carved and picked out in colour. The candlesticks are of bronze.

B
B
SECTION
ON
CENTRE
LINE


HALF
ELEVATION
TOWARDS
NAVE
HALF
ELEVATION
TOWARDS
MONKS
CHOIR
A
A


FOUNDATION
PLAN


1¼" OAK FLOORING
PLAN AT
A · A
11'-6"
1¼" OAK FLOORING

SIDE ELEVATION

HALF FULL SIZE SECTION AT B-B

HALF FULL SIZE SECTION & DETAIL AT C-C

HALF F-S DETAIL AT D

HALF FULL SIZE SECTION & DETAIL AT E-E

HALF FULL SIZE SECTION AT F-F

AMPLEFORTH ABBEY -

NEW CHURCH -

MAIN REREDOS -

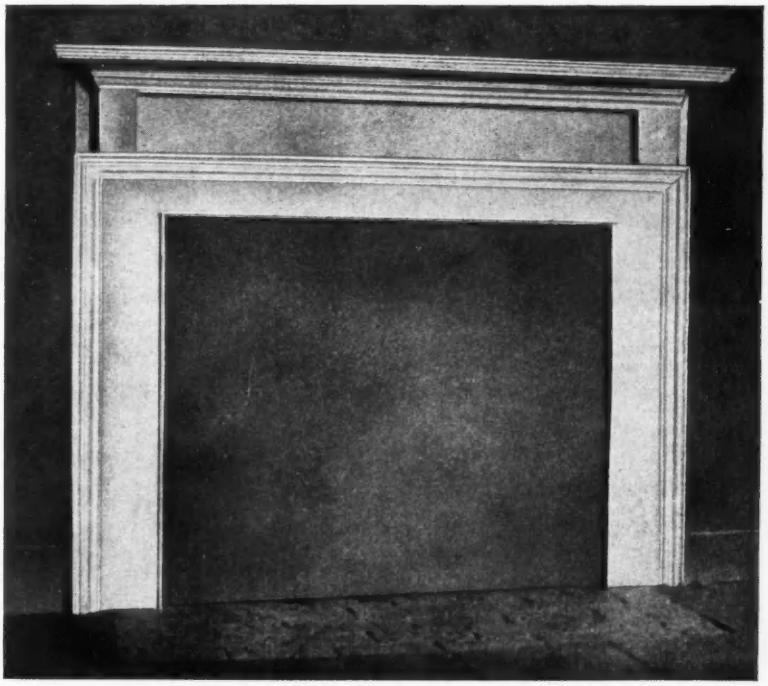
HALF FULL SIZE DETAILS

¼ IN. TO 1 FOOT DETAILS

Sir G. Gilbert Scott R.A. -Architect-

FROM THE NEW WORLD: 9

MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS



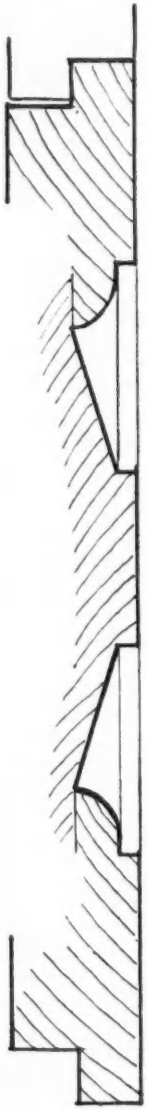
MANTEL IN A COTTAGE NEAR SANDWICH, MASS.

THE drawing within is devoted to mouldings from the Plymouth District. Much of the work shows a pronounced tendency towards the Greek profile—the echinus and Greek cymas being used in preference to the coarser Roman type so much favoured in the English Renaissance of the period preceding the work of the Adam Brothers and Thompson.

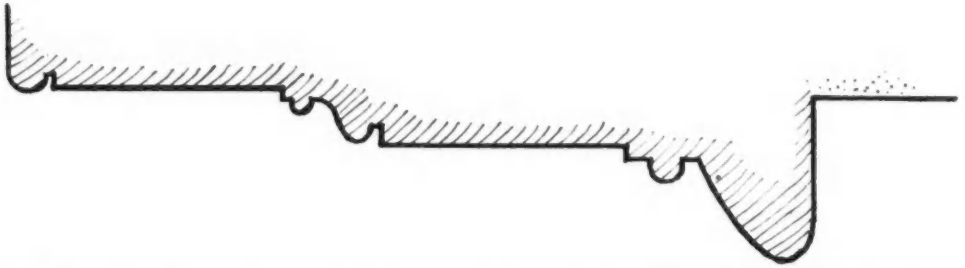
This Greek feeling is evident in the little cottage mantel, of which a photograph appears above, as well as in the more ambitious designs.

On the last page are several examples of fences and trellis-work. Throughout the length and breadth of the Eastern States are to be found old wooden fences of excellent design. The straight-grained pine—weather-resisting to a remarkable degree—was eminently suited for the purpose, and there is no limit to the variation played upon the simple squared or plain rounded baluster. In most instances any elaboration was confined to the posts, both at the corners and at the entrance gates. These posts were often exquisitely designed and excellently proportioned, the terminals being frequently reminiscent of Adam design.

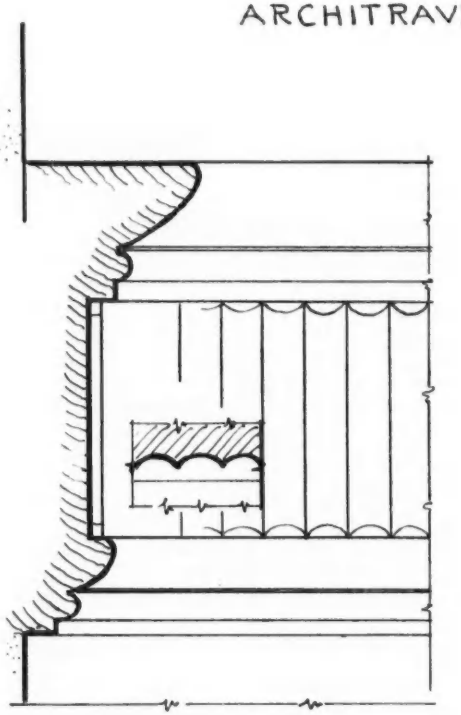
The drawings are the work of R. Keith Harris.



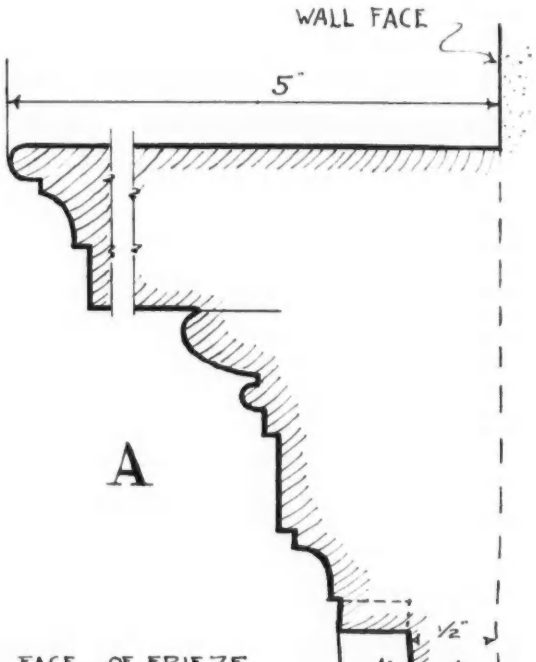
C



ARCHITRAVE FROM HOUSE, DUXBURY, MASS

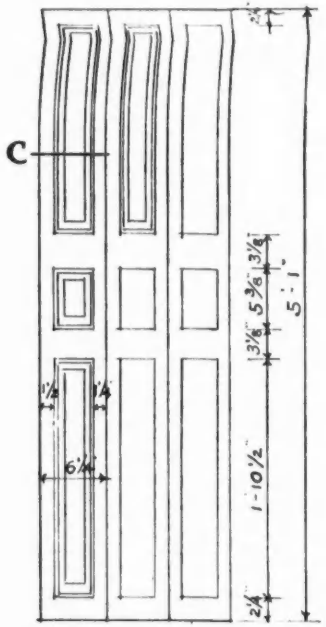


SURBASE MOULD.
HOUSE, DUXBURY, MASS.

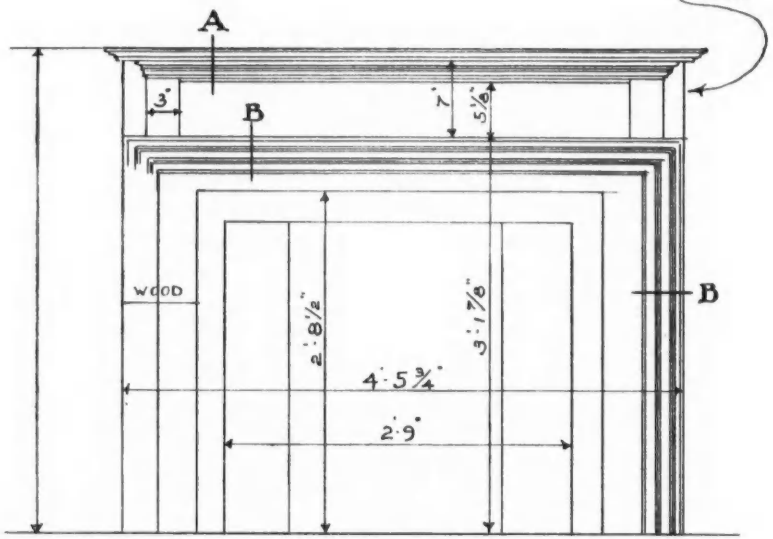


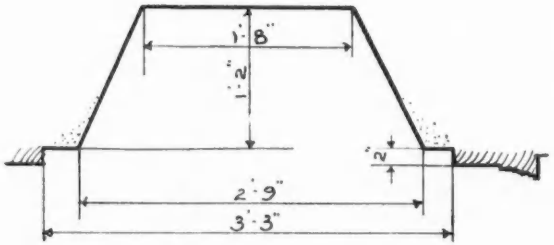
A

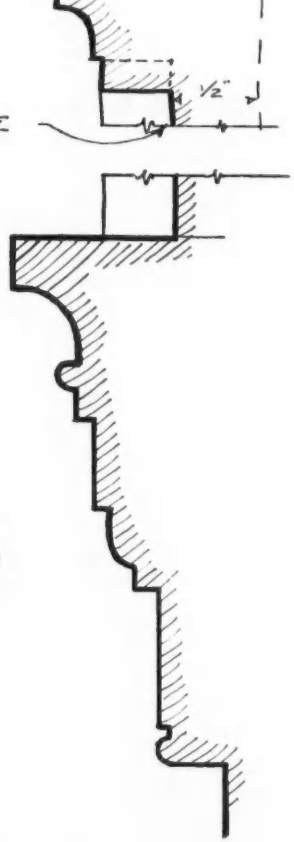
SURBASE MOULD.
HOUSE, DUXBURY, MASS.



INTERNAL
WINDOW-SHUTTER
QUINCY. MASS.





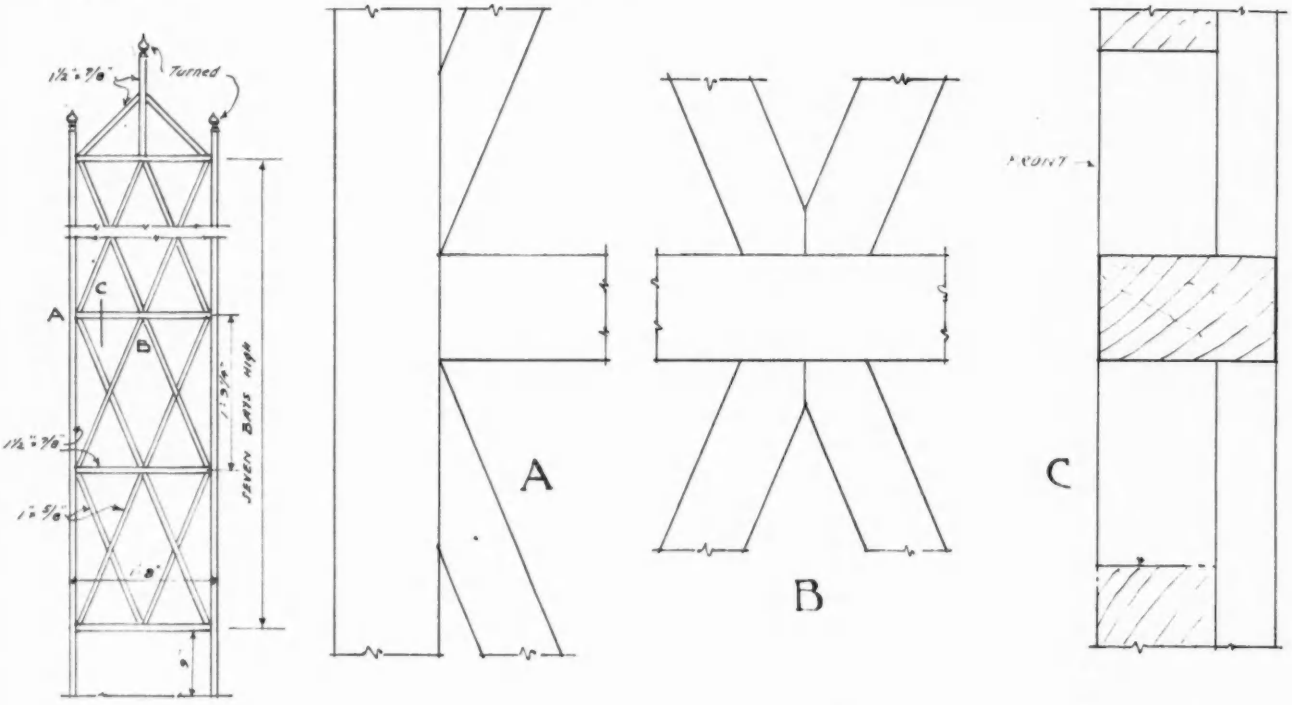


MANTEL IN HOUSE NEAR SANDWICH, MASS.

SCALES: ¾ IN TO 1 FOOT, & FULL SIZE

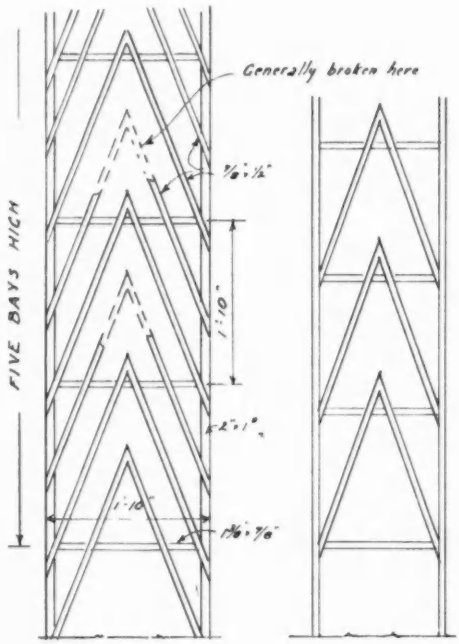
EARLY COLONIAL DETAILS
PLYMOUTH SECTION OF MASSACHUSETTS.

R. KEITH HARRIS. MEMS & DEL.



ROSE TRELLIS BOSTON MASSACHUSETTS

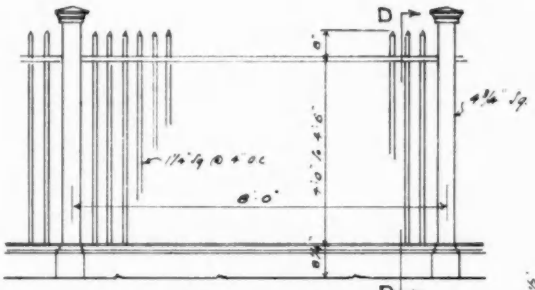
DETAILS

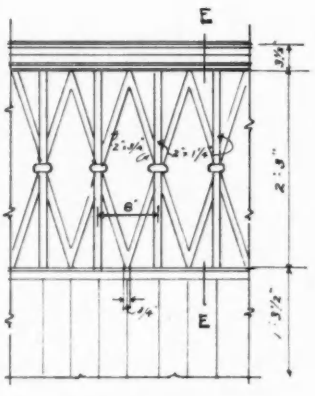


BOSTON MASS

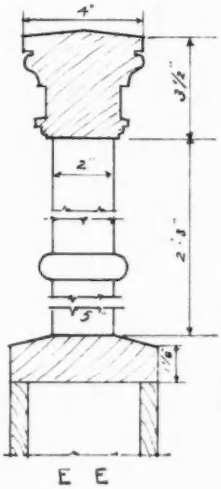
PORTSMOUTH N.H.
NO SCALE

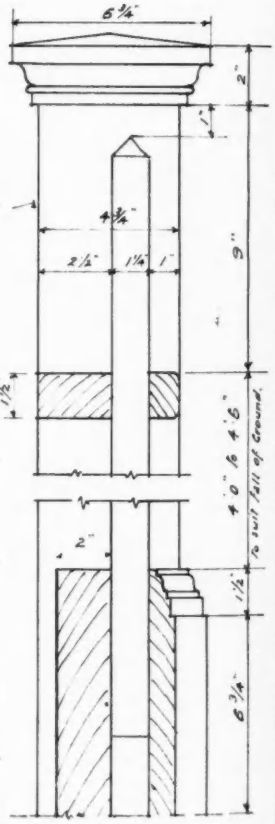
ROSE TRELLIS





NEWBURYPORT MASS





OLD COLONIAL FENCES AND TRELLIS FROM NEW ENGLAND

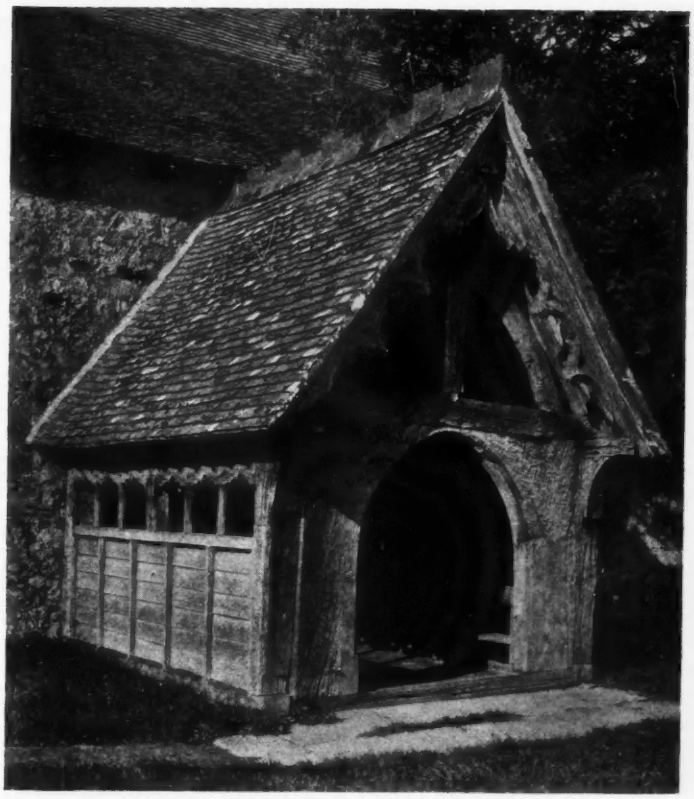
R KEITH HARRIS MEMB. S. DEL.

2"
9"
4'0" to 4'6"
To suit fall of Ground.
1½"
6¾"

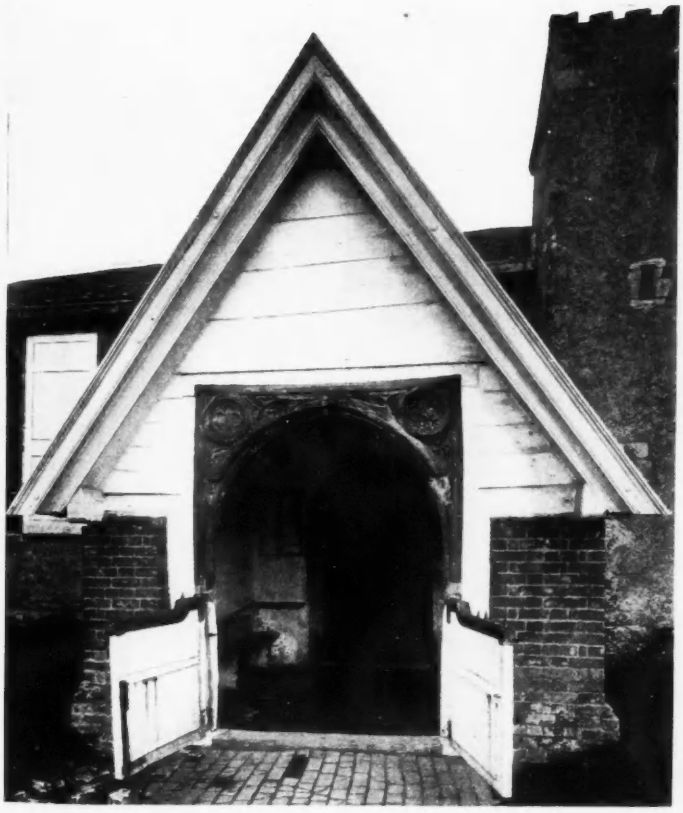
SELECTED PRECEDENTS:
TIMBER PORCHES, CHURCH AND LAY

THE south porch of the church at High Halden, Kent (figure 1), is one of those timber structures found attached to many fifteenth-century parish churches. The jambs and arch are formed of two oak planks, cut from a trunk having a widely-splayed root, which forms the arch proper. The cusping of the bargeboards is particularly fine and well preserved, having regard to the aspect, and must have been cut from the heart oak of a large tree. The mullions of the arcading have perished, but the cusping and tracery are still in good condition. The king-post is of the usual construction, but the addition of two curved braces is not so often seen and, in addition to stiffening the roof structure, furnishes the opening in a very attractive way. The roof tiling and crested ridge tiles are modern, but have weathered to a good colour.

Brookland Church, Kent, stands in the marsh, and is still fortunate in not having undergone recent restoration. The north porch (figure 2) originally must have been a timber structure, of which the arch spandrels only remain. The design and carving of these are excellent



1. HIGH HALDEN, KENT: SOUTH PORCH.



and are up to the standard of similar masons' work.

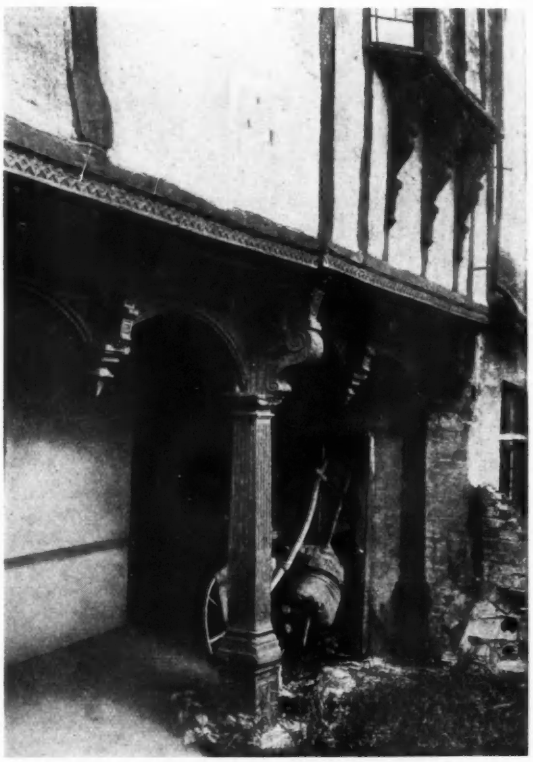
The porch to a little house at Yalding, Kent (figure 3), is a practical piece of work, which, except for the balusters, has no detail not strictly essential to its purpose; yet the total cost of eight balusters would be trifling and the result achieved is notable.

Great Sir Hugh's, near Great Baddow, Essex, has an open loggia of five bays (figure 4), from the back of which the entrance door opens. Fluted, square columns, standing on panelled pedestals, support the carved bressumer, and each bay is sub-divided into two semi-elliptical arches, separated by square pendants; but it is apparent that the brackets which spring from these pendants are merely hung on the bressumer. The lower portion of one of the three oriel windows above is shown in the illustration: the supporting brackets are prolonged downwards to an unusual distance. The whole has considerable charm, notwithstanding its clumsiness.

NATHANIEL LLOYD

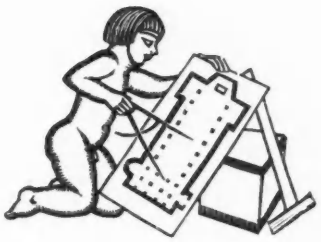
2. BROOKLAND, KENT: NORTH PORCH.

3. *COTTAGE PORCH AT YALDING, KENT.*



4. *LOGGIA AT GREAT SIR HUGH'S, NEAR GREAT BADDOW, ESSEX.*

THE ARCHITECTS' JOURNAL



WEDNESDAY, DECEMBER 23, 1931

HOUSING THE VERY POOR

THE voluntary housing organizations of London and the Under Forty Club together promoted the exhibition briefly noticed by Astragal last week. Let us consider its bearing. It was an exhibition of very far-reaching importance, because it gave what was probably the first comprehensive picture of what is being done upon a purely voluntary basis to solve the problem of the housing of the very poor.

It is a curious fact that although the Government appears to be a machine for the co-ordination of effort deployed over a wide front, its powers of effective action are limited, as are those of any ordinary man, to doing one thing, or at most a few things, with equal zeal at any one time. Thus it was that while every resource of the State was bent to the task of building houses, the attack was found to be centred upon a certain type of house at the expense of all other types; and while one saw spreading wider and wider the sea of housing set loose by Governmental action, inside the towns the evils of congestion were multiplying themselves with but little hindrance.

Suddenly comes a cessation from suburb-building; and all eyes centre upon the slums.

It is hard to think why we should proceed thus in a series of leaps from one thing to another, and why we have no plan of action extending into the future, to guide our expenditure and safeguard our steps. It is hard to think why in days of practical socialism we should allow voluntary organizations to tackle with devotion the fringes of a problem that belongs properly to the State, especially when the chief difficulties lie bedded in landed interests with which State action can alone deal adequately and fairly.

But in the present state of affairs these questions of major policy go unanswered—leaving for our solution the baffling economics of cheap tenement and house building. These, if we can solve them, offer such possibilities for the extension of re-housing developments as may carry us as far as we can go for the next few years. Re-housing has cost us very dearly in the past. We have allowed haphazard development to create a vested interest in overcrowding which has fought hard against efforts to replace it with more humane conditions. In time past the authorities had no effective weapons at their disposal, for it must be remembered that local authorities may only take such action as the law allows them, and that until the passing of the last Slum Clearance Act the law was not directed to make their powers extensive.

Power has come now to deal effectively and to plan ahead. But still in London we have no plan which can fit slum clearance into an economical working scheme for the central areas, and no incentive is presented for the type of long-term re-housing plan which would call forth such constructive thinking as made Ernst May and Frankfort famous throughout Europe.

It is obvious that re-housing costs can be reduced still further, and that without substantial lowering of the high standards set to date. We still build Georgian. We still employ the expensive wooden sash window, the tile roof and other features which are matters of taste, and are not dictated either by economy or good structure. Working within restrictive building ordinances, we still build too heavily, carrying heavy walls upon steelwork originally too heavy, and made heavier by the imposition of too heavy materials.

There is not brought to the problem of this building the searching inquiry out of which modern Continental architecture has arisen with such strength, such lightness and such promise of fine living.

When all praise is given for the efforts made and the good work done in England, this final testing stands before us. It is a matter of money, like everything else; and, like everything else, much more than money can ever stand for.

[*A. H. Wegerif Gzn., Architect.*

AN EXAMPLE OF DUTCH DOMESTIC ARCHITECTURE

The contrast between the white walls and the well-proportioned bay window gives this house at Wassenaar, Holland, a southern appearance. The austere lines, however, blend harmoniously with the wide horizons of the flat Dutch landscape. A review of *Modern Cottages and Country Houses in Holland*, by Professor J. G. Wattjes, from which the above illustration has been reproduced, is published elsewhere in this issue.

NEWS & TOPICS

"BUY BRITISH" MEANS "MAKE BRITISH"

IT is interesting to speculate upon the probable results, apart from the almost certain reprisals and undercutting from abroad, of tariffs and the "Buy British" campaign. Very many articles associated with modern architecture, and especially such things as electric light fittings, come to us from the Continent, but will no longer come. Our own fittings are generally of execrable design. Who is going to produce the right stuff, in sufficient quantity?

★

This is a pertinent question, because we have been importers of ideas as well as goods, and we as architects are faced now with the unenviable job of convincing our own manufacturers that the foreign designs we like are better, and must be made *and designed* in the future in England. These designs involve shaped glass and moulds, are mass productions, and must therefore be selected with the greatest care.

PEAT FOR INSULATING BOARDS

There are, of course, innumerable ways of overcoming our indebtedness to foreign countries, if this is to be the be-all and end-all of existence. For instance, we import enormous quantities of insulating board from abroad. Some is made here, but from imported raw materials. Now the Germans, despite considerable reserves of the right timbers, use large quantities of peat, both loose and in slab form, for every type of thermal insulation. We have plenty of peat in this country, which brains and organization can put on the market in place of imported insulators. It is a particularly apt substitute for cork, which has not even the saving grace of being an Empire product. It appears to have definitely high thermal and sound-insulating qualities.

THE L.C.C. AND "GRADE A" STEEL

I understand that the L.C.C. are to be presented with an Interim Report recommending the adoption of a code that will make it compulsory to use Grade A steel in the framework of London buildings. Grade A steel, which is British, can be stressed up to 18,000 lb. per sq. inch. Grade B steel, which is foreign, to 16,000 lb. only. The immediate results of such a policy would be two-fold. One, a large increase in the use of British steel, and two, a lowering of existing factors of safety, both of which are economies of the right sort.

★

Since a great deal of foreign steel is being used on buildings being erected in London at this moment it is to be hoped that the L.C.C. will be able to act at once.

THE A.A. PANTOMIME

Three strokes on a gong. The drawn curtains disclose, against a brilliant green-white background, a statue seen in silhouette.

Little god, Pan,
Little god, Pan—

sings the chorus; then, just as the feet begin to move to the lilt of it :

Little god, Pan-tomime !

On come the lights; H. C. Inglis, that subtle comedian, slowly revolves and steps down from his pedestal and is seen to be no traditional satyr, perhaps, but rather a figure of satire in a leopard-skin and a top-hat and what-not. The A.A. Pantomime has arrived, with its iridescent hues and humours, its lovely ladies, its high spirits.

★

An outsider, like myself, is bound to miss a good many of the points that tickle the students most in this highly original annual revue. For it is essentially their own particular show—words, music, *personae*, scenery, and, not least, the marvellous lighting that they contrive in the lecture-hall. But who could fail to chuckle at the priceless guide-patter of that other comedian of the company, W. P. Dyson, reeling off his piece to the American tourist in "Erechtheion," or ranting, as Captain Bloodenough, through that fearful melodrama, "Penny Plain or Two-pence Coloured"? This year, again, there was a charming operetta among the twenty turns, and a ballet, most cleverly mimed — of a young man who worshipped a machine, and, since it is a sewing machine, is stabbed to death by its bodkin.

★

"Operatic Architecture" went with intoxicating swing to well-known airs : to "John Brown's Body" the chorus somehow became :

Glory, glory, Edwin Coo-oo-per !
Glory, glory, Edwin Lu-ut-yens !

And M. A. S. Dugdale's mock-lecture, "Architecture and all That," with the names and references all twisted, after the manner of the (very) lay Press, evoked a dropping fire of laughter. But a moment of pathos arrived. Three young diplomees are on their knees for a job to a full-fledged architect. They chant :

We can build you a church in concrete
Or an aerodrome in steel;
But we can't get a job
And we haven't a bob—

Ay, there, with a vengeance, is the rub, with the £ sinking despite Britannia's Empire (and quite empirical) window-dressing.

ADVERTISEMENT PROSECUTION FAILS

Another attempt to prosecute under one or other of the advertisement Acts has failed, as much by the lack of applied psychology as by anything else. It was one of the county councils who took as an example for the exercise of their powers a little building that had borne the fluttering little scraps of advertising paper these twenty years. To support them in their case they produced leaders of preservation, worthy ones of the Academy. And the defence, not to be outdone, brought artists and men of taste, no less articulate. The Bench decided in favour of the *status quo*.

★

The moral of this is, O high and mighty County Council, that you may only govern by consent. If it appears that the control of advertisements has not yet reached the Bench as a thing to be desired and sought after, then it behoves you to deal gently and lovingly with the misguided advertiser, and should your patience be at last exhausted, to approach the Bench only after the administration of fitting education in the matters in hand.

ASTRAGAL

FISH BAR

No. 1 Barrett Street, W.

DESIGNED BY FORBES AND TATE

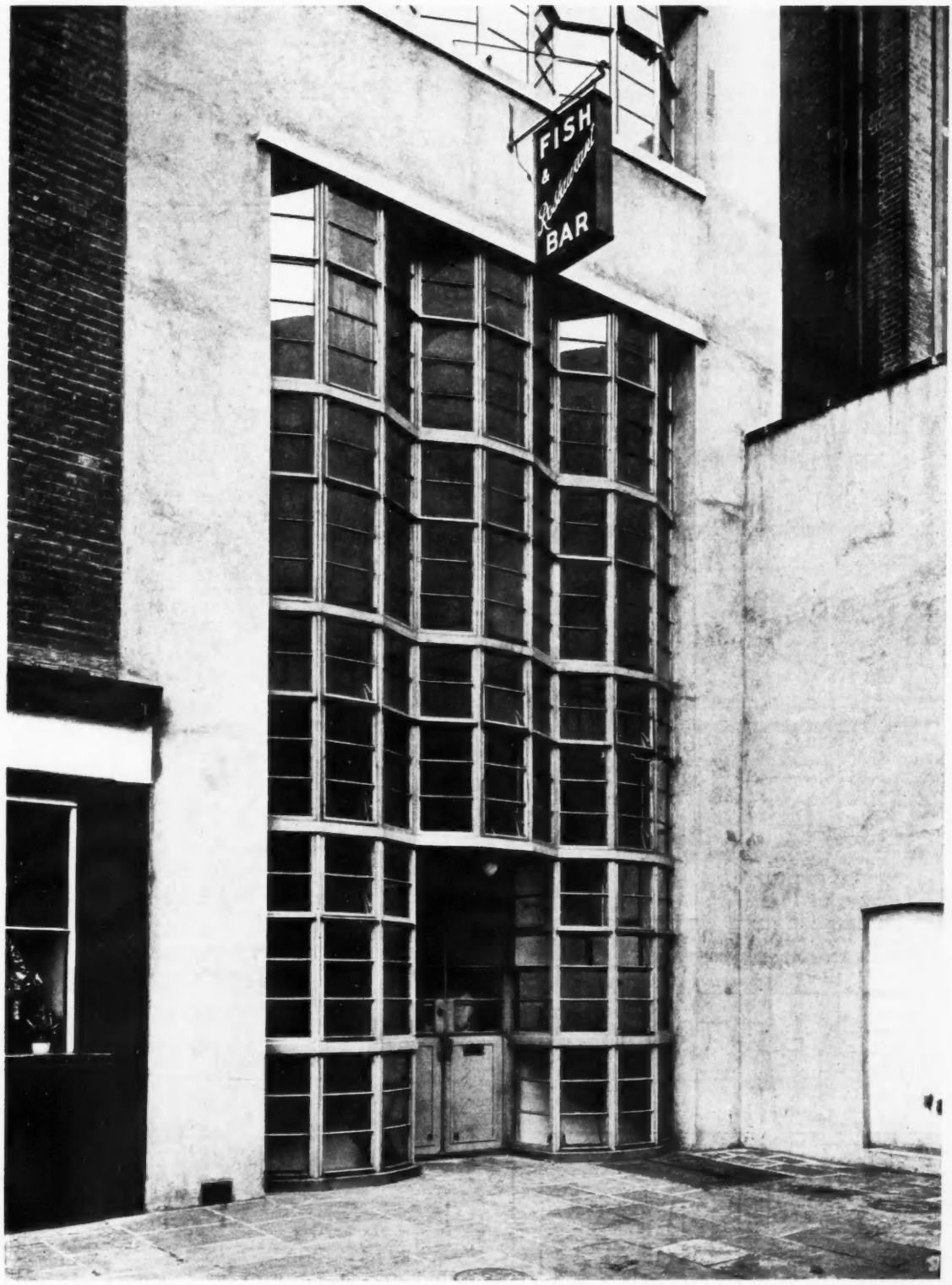
THERE is something in the sound of the words "Fish and Chips Shop" which gives one great uneasiness, architecturally. The whole character of such a shop differs materially from that of any other building, but the outstanding cause for anxiety is the smell of the frying fish—a smell that can annoy one almost beyond endurance.

In designing the fish shop illustrated herewith, the architects have solved the problem by providing strong ventilation in each room, with a very large outlet at ceiling level, the air being drawn up by extract fans to the roof. The force of this ventilation, although not unpleasant in the restaurant, is so great that, if an envelope is thrown up towards the ceiling and within a few feet of the extract opening, it is immediately drawn and held by the force of the air!

The architects have endeavoured also to obtain as much light and sun as possible into the building and to treat the walls and floors in such a manner that they can be kept scrupulously clean and so again avoid smell.

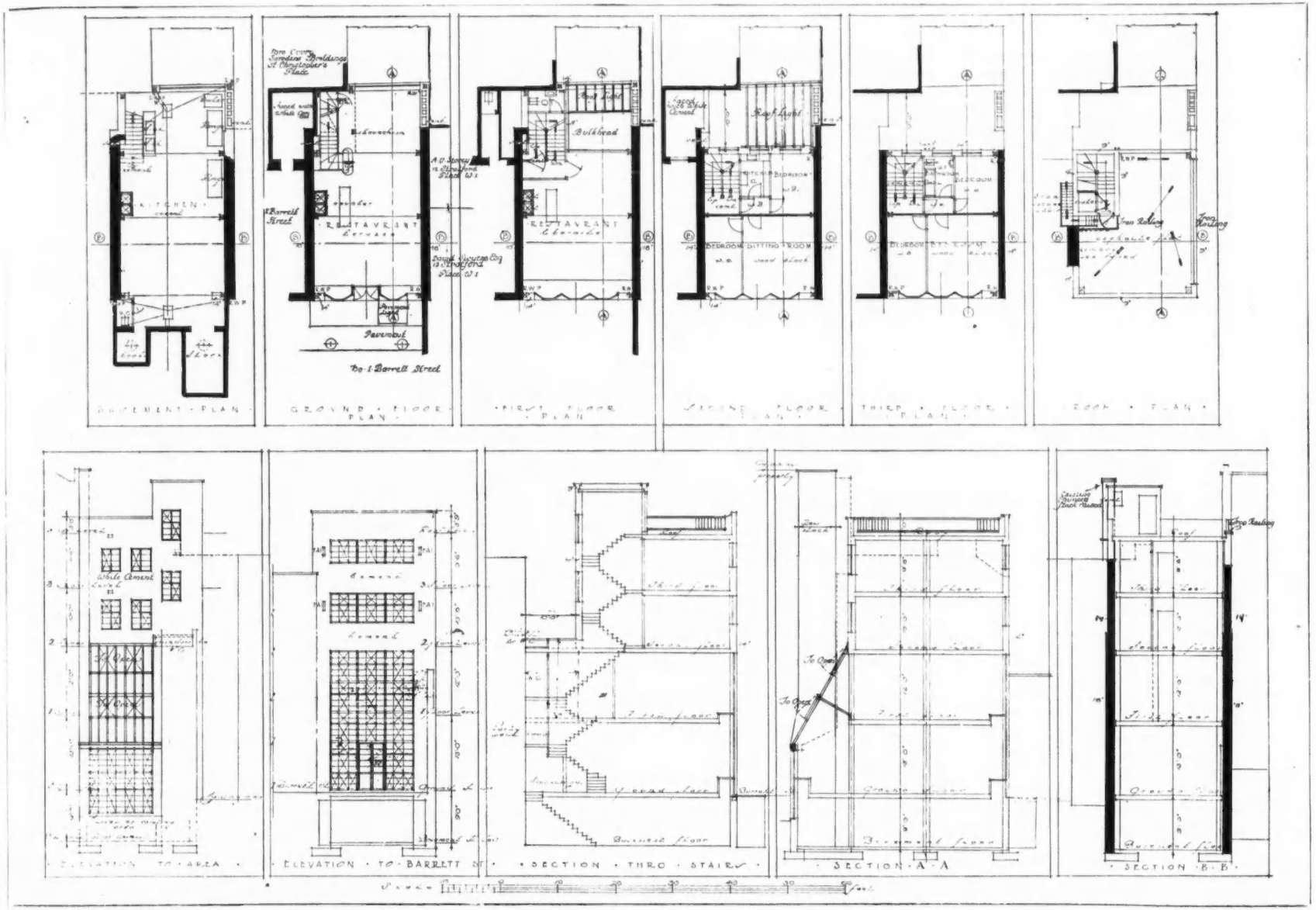
In the restaurant on the ground floor, looking towards the Barrett Street front. The floor is of terrazzo and the table tops are of glass.

Another view in the restaurant on the ground floor. The walls are lined with marbled marmorene, $\frac{1}{4}$ in. in thickness, with black marmorene bands. The ceiling is of opal plate glass, fixed in wooden beads.



Fish Bar, Barrett Street, W.] [*By Forbes and Tate*

This photograph of the first two stories of the Barrett Street façade should be studied in conjunction with the architects' elevational drawings, reproduced on page 828. In the basement is the kitchen, and on the ground and first floors are two restaurants, nearly 20 ft. wide by 35 ft. deep and 25 ft. deep, respectively. Above the hanging sign are two more stories containing the living quarters, and consisting of a kitchen, sitting-room, bathroom and five bedrooms.



Fish Bar, Barrett Street, W.] [*By Forbes and Tate*

The architects' drawings of the plans, sections and elevations. The main problems to be solved were to eliminate the objectionable smell which usually emanates from fish and chip shops, to obtain as much light and sun as possible into the interior, and to treat the walls and floors in such a manner that they could be kept scrupulously clean.

THE PORTENT OF CONCRETE

BY SIR E. OWEN WILLIAMS, K.B.E.

THE outstanding property or quality of concrete which makes it valuable in building construction is its compressive strength, i.e., its resistance to crushing. It is this compressive strength that has been so improved in recent years and which also has the unique property of increasing in value, even after the concrete has been made. It can be moulded to any shape, in fact so easily that it becomes a menace if its dangers, as well as values, are not equally studied.

There is one outstanding property which concrete lacks, namely, any high degree of tensile strength. It does not withstand, with any great resistance, being torn apart. Although it lacks this property it cannot be termed a defect, as its correction by the introduction of reinforcing steel gives to the combination a value which is greater than would be found in a concrete possessing a high tensile strength.

Crushing and Tearing Tendencies

All structures are subjected to crushing and tearing tendencies in various parts or members of the structure, and it is the science of engineering to determine where these two tendencies exist, and to what extent. Where there is only a crushing tendency, then concrete unassisted is able to take it. Where there is a tearing tendency concrete alone might be lacking and certainly would be uneconomical. The introduction of steel rods into concrete corrects that tearing tendency, so that reinforced concrete becomes a material capable of taking crushing loads by virtue of the concrete, and capable of taking tearing loads by virtue of the steel rods, an ideal combination, and allowing a degree of flexibility in design not possible as far as I know with any other material. For example, a homogenous material such as timber has for definite sizes of timbers definite strengths, and similarly with any other homogeneous material, such as steel or stone, the measurements of the external dimensions of members made of those materials can give you immediately an idea of their strength. With reinforced concrete, because it is a mixture of two materials, the same rule does not apply. The strength of a reinforced concrete member depends upon the proportions of steel and concrete inside it. Two members in reinforced concrete of identical sizes externally can be very different in strength because one has been more highly reinforced than the other. The value of this possibility in what may be termed regularizing design is considerable.

The Uses of Reinforced Concrete

Reinforced concrete has been used almost exclusively as a substitute for other materials, i.e., the requirements have stretched other materials to their extreme, and as in extremes the older materials became uneconomic, reinforced concrete was found to be an economic substitute. This has been carried to such an extent that I would almost say that there is not yet in being a building which could be termed purely reinforced concrete, that is, to some extent at any rate, it is only playing the part which could be played by other materials, perhaps not so conveniently or economically, but still within their limits. For this reason it is wise to suspend judgment on what a reinforced concrete building looks like, because I do not think there has yet been one.

It is only natural that the material should have been used as a substitute during the period of its apprenticeship and whilst we are learning all about it, and as such it has given extraordinarily good service. I would point out that as a substitute it only becomes to be economical during the limits of other materials, that is, when other materials are almost beginning to impinge upon the realm of concrete. For the types of structure which are well within the reach of timber and bricks, concrete is not an economical substitute. It was not intended to be a cheaper way of doing such things, but rather has been given to us to do different because bigger things.

Steel and Concrete

Many of you will be interested in the controversy as to whether structural steelwork or reinforced concrete is the material for the present or the future. It is a matter of economics. Reinforced concrete does not ignore steel—it claims to take one property of steel and one property of concrete and combine them. It can strictly claim to be neither a steel building nor a concrete building but claims to be the economical combination of both.

Sir E. Owen Williams.

Incidentally it is an interesting mathematical fact that, in the logical constructions of concrete, by which I mean not where it has been used solely as a substitute, the cost of a reinforced concrete building is least when the cost of the steel is precisely equal to the cost of the concrete. In structural steelwork they also use steel in tension: therefore the bone of contention is whether steel in compression is more economical than concrete in compression. I think the onus of proof is strictly on the structural steel advocate because reinforced concrete has as much steel as concrete, and therefore is based on an appreciation of both.

Definite calculations show that to carry equal compressive loads the cost of doing this in structural steel is three times as great as in reinforced concrete, that is, if you had 1,000 tons load on a column the structural steel column would cost £3 in every £1 expended on a reinforced concrete column, not allowing for the fact that the structural steel column would be increased in cost by fireproofing, for which they are driven to adopt concrete.

Steel in compression can therefore be said to be three times as expensive as concrete in compression. Further, in tension a structural steel member is, by virtue of the labour required for fabrication, very much more expensive than the same area of steel bars in a reinforced concrete member. It will be argued that the sizes of the concrete columns are greater. This is not necessarily so in view of the greatly improved reliable compressive properties of concrete. At the moment a concrete column need not be any bigger than the usual type of structural steel column; and as research is going on in concrete, there are grounds for believing that the relative proportions between the costs of concrete and steel will be even further increased.

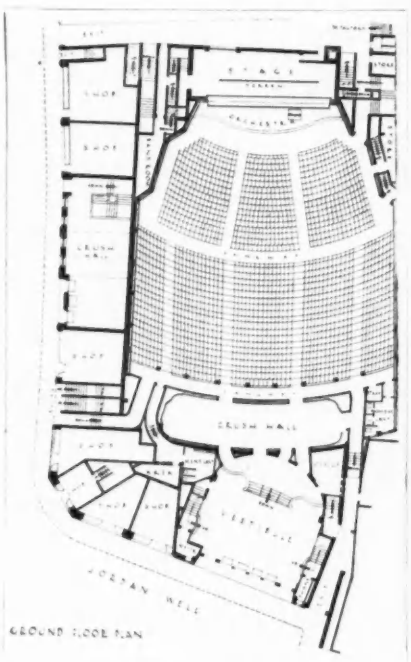
You will see therefore that I dismiss steel as being a lasting competitor of concrete as a compressive medium. Steel is in its right place as a tensile medium and concrete is in its right place as a compressive medium, and the combination will, in the end, wear down all competition.

Extracts from a paper read by the author at a meeting of the London Society, held at the Royal Society of Arts on Friday last.

THE GAUMONT PALACE, COVENTRY

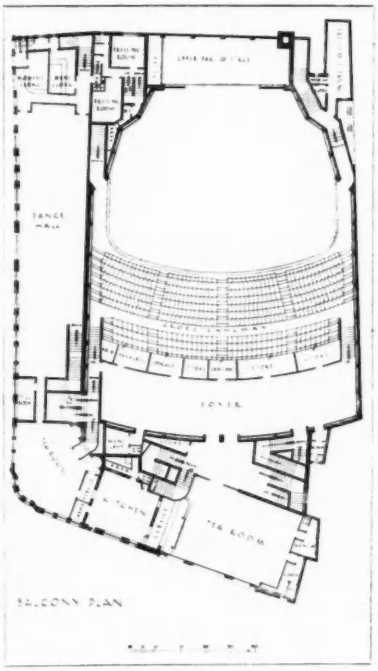
DESIGNED BY

W. H. WATKINS



Features of the street level plan are the ample vestibule and crush halls, enabling patrons to wait in comfort.

The main entrance to Jordan Well. The building is faced with cream terra-cotta. The windows are bronze.



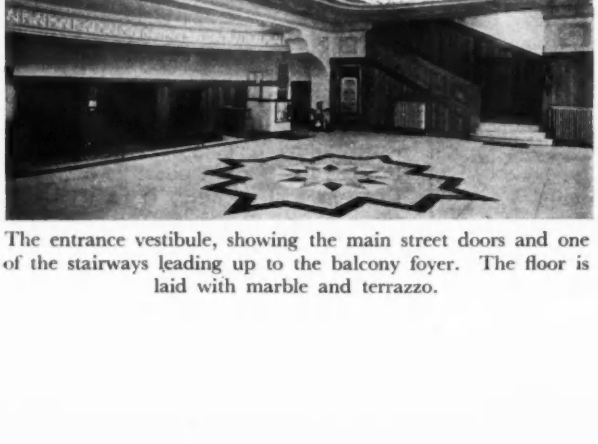
Alongside the balcony a dance hall has been designed, with a café. The kitchen also serves the main tea room.

THIS cinema is situated at the junction of Jordan Well and Whitefriars Street, Coventry, with entrances and exits to each thoroughfare. The seating capacity is over 2,600 (stalls : 1,750: balcony : 900). It was the proprietors' desire to eliminate queues, and, accordingly, crush-hall accommodation has been designed with this in mind; if necessary it is possible for 1,000 people to wait under cover in comfort.

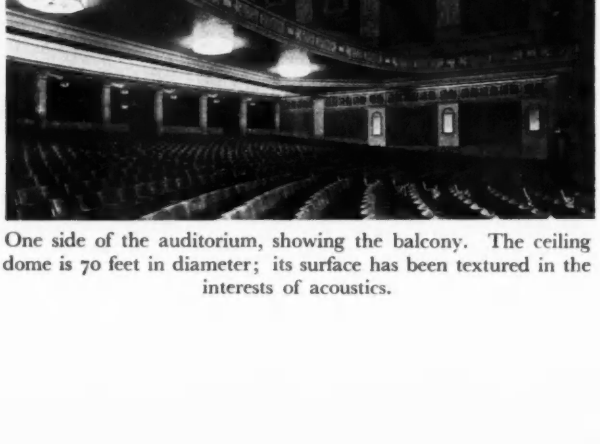
The building is a steel-framed, fire-resisting structure, and is equipped in accordance with the latest practice in lighting, heating and ventilation, picture projection and acoustics. It was designed by Mr. W. H. Watkins who has built cinemas for the company at Bristol, Plymouth, Exeter and Barnstaple.

The main entrance façade, to Jordan Well, is 65 ft. wide and has been carried out in cream terra-cotta to match the facings of adjoining the premises. The deep architrave surrounding the bronze casements and panels to the café and foyer is in a warm green, and colour has also been introduced in the pilaster caps and bases.

Within, the main vestibule is spacious and gives access to the café and balcony foyer by means of wide, easy staircases at each side. A broad flight of steps at the apsed end leads to the stalls, crush - hall and auditorium. The



The entrance vestibule, showing the main street doors and one of the stairways leading up to the balcony foyer. The floor is laid with marble and terrazzo.



One side of the auditorium, showing the balcony. The ceiling dome is 70 feet in diameter; its surface has been textured in the interests of acoustics.

[*Gaumont Palace, Coventry.* *By W. H. Watkins.*]

Looking towards the proscenium from the balcony. This view also shows the gilt and enamelled grille in the centre of the ceiling dome. The stage is fully equipped for every form of entertainment.

secondary entrance, from Whitefriars Street, gives access to the front stalls, and here again a large crush-hall has been provided for the convenience of patrons. The vestibule floors are laid with marble and terrazzo, and those of the crush-halls with rubber and carpets. The walls are panelled in pine, stained silver-grey. From the foyer access is gained to the front of the balcony by means of two vomitories and to its rear via two wide staircases leading to a further crush-lobby. The spacious lounges have been treated in a modern manner, and restraint is the keynote of the decoration, although much use is made of colour to give, together with the subdued lighting effects, an effect of comfort and repose.

The auditorium has been treated in a manner reminiscent of the Italian Renaissance style, allowing, as it does, free use of colour. The main interest is centred in the proscenium and the domed ceiling. The proscenium is of generous proportions, and in the design subtle tones of jade, lemon and rose, relieved with gold, are used. With the aid of the skilful lighting effects this creates a fitting frame for the picture.

The main ceiling dome, which is 70 ft. in diameter, is worthy of notice; its surface has been textured to ensure good acoustics, and there is a fine gilded and enamelled circular grille above. Here again the lighting effects have been blended to create rich and harmonious effects. The walls are treated in a more restrained manner and are covered with fabric which destroys reverberation and allows of perfect sound results. The rose-coloured seating and carpets, together with the tableaux curtains, harmonize with the subtle tints of blue, primrose, green and gold to create an atmosphere of luxury.

At the balcony foyer level there is a café restaurant over, where 200 patrons can be comfortably accommodated. This apartment has been treated in a distinctly modern manner, Continental in style; tones of eau-de-nil and coral pink predominate. Well-proportioned mirrors line the walls and foster a feeling of space.

Adjoining the theatre is a spacious ballroom, brilliantly lighted, as a modern ballroom should be, and decorated in tones of magenta, jade and silver, having a café lounge adjoining, decorated *en suite*, where dancing patrons are catered for. Ample cloakroom accommodation is conveniently arranged adjoining the entrance vestibule.

The stage, which has a floor area of over 1,200 square feet, is fitted up with all the latest equipment of every description, has dressing-rooms adjacent, and is suitable for the production of all forms of entertainment.

The heating and ventilation is carried out on the plenum system, the plant occupying extensive basements. Purified and warmed air is delivered through a main duct to various points, whence it issues through grilles into the auditorium and crush-hall in such a manner as to prevent any suggestion of draught.

Competition Result

MR. A. H. MOBERLY, F.R I.B.A., the assessor in the competition for the proposed new Orphanage in Woolton Road, Wavertree, for the Committee of the Liverpool Orphanage, has made his adjudication as follows :

First premium (£200), Messrs. Barnish, Silcock and Thearle, F. AND AA.R.I.B.A., of 58 Rodney Street, Liverpool.

Second premium (£100), Messrs. Willink and Dodd, F.R.I.B.A., of Cunard Building, Liverpool.

Third premium (£50), Messrs. Briggs and Thornely, F.R.I.B.A., of Royal Liver Buildings, Liverpool.

The competition was limited to architects who were resident or had an office within a ten-mile radius of Liverpool Town Hall.

LETTERS FROM READERS

Stereotyped Clichés

SIR,—The reporter of the Liverpool Architectural Society's discussion, "Functionalism means the Overthrow of Tradition," who really did wonders in condensing a very varied and complex discussion, got my words wrong (page 751, December 2 issue). I did not deplore the establishing of a strong tradition in modern design. This is what we all want. I pointed out that there was, as always, the danger of people seizing upon new *details* and working them to death in the form of stereotyped clichés: in other words, having disburdened the ship of a lot of overworked and wearied junk, taking a lot of new stuff aboard, which becomes tedious sooner than the old.

This has happened most grievously during the past few years: indeed, there is a danger of some of the hangers-on of the modern movement producing the same swift tedium of cliché that occurred in the Rococo, that modernizing period of the Renaissance.

As Professor Adshead said recently, no manner is more difficult than the present Modern: may I add also that none lends itself more easily to a cheap ignorant imitation.

PATRICK ABERCROMBIE

Plaster for Concrete Ceiling

SIR,—We quite agree with the writer of the letter, "Plaster for Concrete Ceiling" in the JOURNAL for November 25, that the method of hacking under concrete slabs and plastering direct has proved none too reliable. As a rule, there are just a series of holes made with a pick, and if the underside of the concrete is smooth there is no reliable key. The consequence is that during vibration, or even without vibration, it frequently happens that the skimming or plastering falls off.

The new material that your correspondent mentions is well known to us. We have used it extensively, and so far as we know there have been no failures. It is easily applied during the course of putting in the concrete slab, and forms a good key for the plaster.

With regard to using only one instead of two coats of plaster, we are afraid this is impracticable, as you are much more likely to get an even coat on the uneven surface which is usually left on the underside of concrete floors by two-coat than by one-coat work. Moreover, you would have to use in one-coat work a much fatter material, which would not be so satisfactory as the usual two-coat work.

In factories, it is true, you can well reduce the two-coat to one-coat work, as we have recently done on a very large surface, but in this case it is not a suitable finish for domestic work. For this purpose, however, the one-coat work is gauged with cement.

W. AND T. R. MILBURN

SIR,—Your correspondent, F.R.I.B.A., asks, "Why use two coats of plaster" on concrete ceilings? This, like many other questions in regard to standard specifications applied to modern forms of construction, cannot be disposed of in a few words. The Plasterers' Association have given a good deal of consideration to the growing practice of surveyors of measuring one-coat work on concrete, and it is agreed by the trade that it is a difficult item to price when tendering.

Some surveyors cover themselves by specifying the work to be ruled and brought to an even surface. Provided the concrete is true and level, a good job can be made with one coat by using gauged instead of ordinary material, but it is not to be thought that the cost of one coat is saved, nor should any but experienced plasterers be left to get over the job with one coat.

My own view is that architects should continue to specify, render and set on concrete ceilings, but that if the master plasterer gives an equally good finish by the use of gauged material and the employment of skilled workmen who know their job, then it should not be considered that he "is getting away with anything."

G. M. SHEER
(PLASTERING, LTD.)

SIR,—I have read with interest F.R.I.B.A.'s letter on "Plaster for Concrete Ceiling." I note he suggests reducing the weight and expense of two-coat plaster work to ceilings by substituting one coat of lime putty gauged with cement.

The usual practice on all good-class work is to use the render-float-and-set method, or, as it is sometimes called, the three-coat method. The render coat is used to obtain a key for the floating coat, which, in turn, provides a level surface for the setting or finishing coat. This latter coat must, of necessity, have a smooth finish (being invariably carried out in some form of plaster). In this type of work the render and float coats usually consist of sand and cement in proportions of three parts sand to one part of cement, the render coat being applied in slurry form and the float coat averaging three-eighths inch in thickness.

One-coat work, such as is suggested in F.R.I.B.A.'s letter, is not, to my mind, a practical suggestion. It has been used on jobs where price is the predominating factor, but has rarely proven satisfactory. Owing to the thinness of the rendering, uneven and fast drying take place, which are certain to result in cracking.

Where a really efficient key can be assured by the use of a liquid material, two-coat work, which is commonly known as render-and-set or float-and-set, can be relied upon. F.R.I.B.A. states that hacking is none too reliable unless strict supervision is attendant on the work, but he does not appear to realize that, even were the concrete well hacked, a key would be obtained on less than 25 per cent. of the total area. Furthermore, to quote from the Building Research Station's report on construction joints in concrete: "when chipping and wire brushing had been resorted to, fracture occurred close up to the joint, but in the old concrete." Even should a bond be obtained, the concrete becomes weakened by the hacking, with the result that it is liable to pull away with the new rendering. If a reliable cement retarder is used, a perfect natural key is obtained, and this trouble entirely eliminated.

C. KAHN
(REDALON, LTD.)

Fire Testing

[Following are extracts from a letter that is being addressed, writes Dr. Stradling, to firms in the building industry regarding the institution of a laboratory for testing the resistance of building structures to fire.—Ed. A.J.]

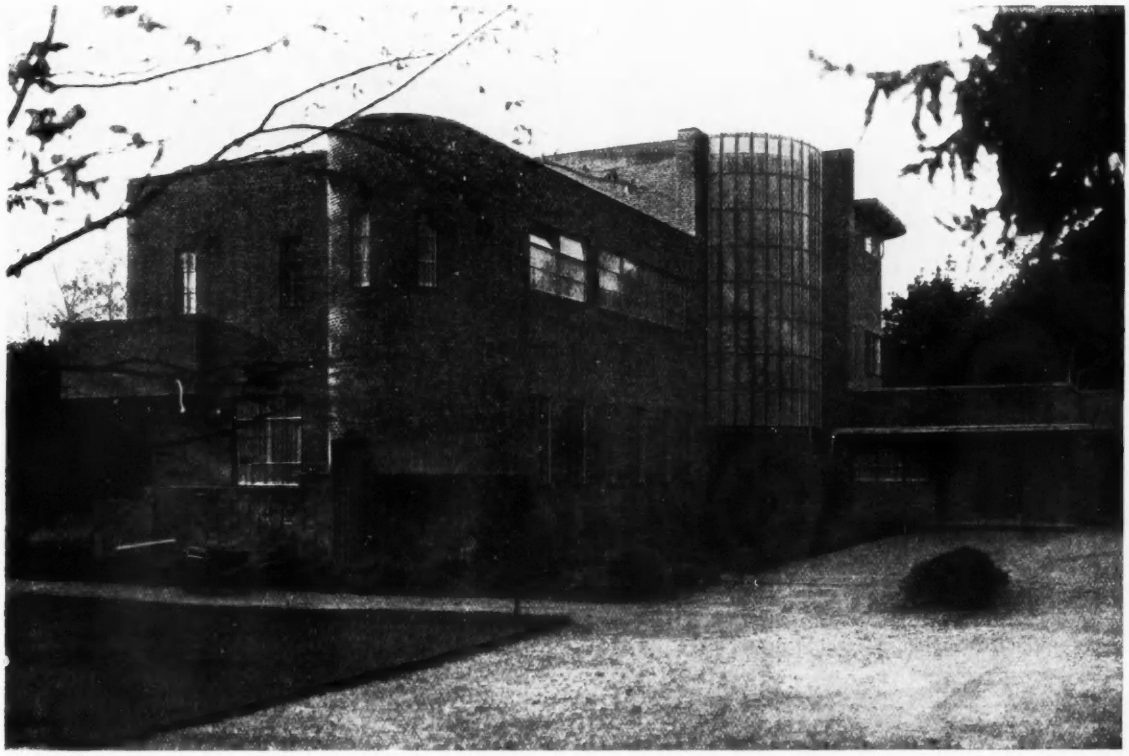
It is not surprising, in view of the direct importance of fire tests to the building industries, that many requests for tests on building materials and methods of construction have been put to the Building Research Station during recent years. But it has not been possible to meet these requests, first, because a sound basis for fire-testing had not been enunciated: secondly, because the necessary technique had not been developed at the Station: and, thirdly, because the necessary testing facilities are not available either at the Building Research Station or elsewhere.

In these circumstances the Department considers it expedient to invite those firms who are interested in the provision of these facilities in a central and authoritative testing laboratory, and who are prepared to bear a share of the financial support necessary for the establishment of such facilities, to attend a conference to discuss how best to attain the desired end.

Any persons or bodies who are sufficiently interested to be willing to contribute to the cost of such a laboratory, and who may not be approached directly, should communicate with me at the Building Research Station.

R. E. STRADLING
(DIRECTOR OF BUILDING RESEARCH)

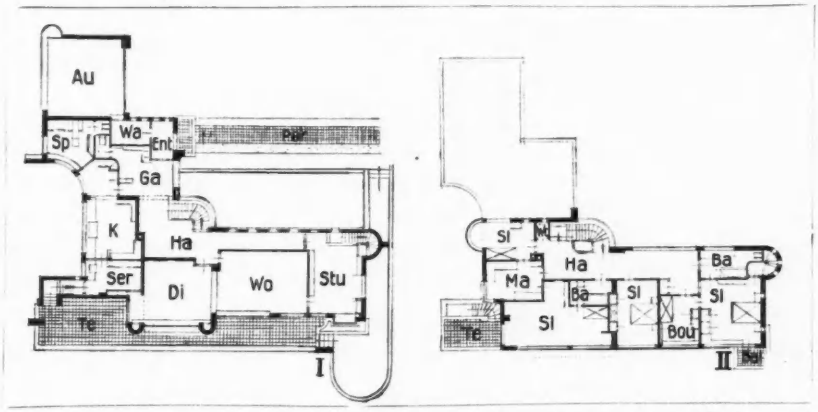
MODERN COTTAGES AND HOUSES IN HOLLAND



A house at Hilversum. Designed by H. Th. Wijdeveld. The entrance is on the right, adjoining the garage. The large semicircular glass window lights the hall staircase.

WHEN Dr. Slothouwer lectured before the R.I.B.A. in 1924, his illustrations seemed to show that post-war Holland was about to produce a truly national architecture. Following on the pioneer work of Berlage and de Bazel, the younger generation, led by men like de Klerk, L. M. Luthman and W. M. Dudok, were adapting to modern needs the traditional Dutch brickwork, and were developing a style that would eventually vitalize all types of building.

The illustrations in this book[1] of lesser domestic architecture suggest that such expectations have not been wholly realized. Among the four hundred odd photographs and plans of modern country houses, there is no common denominator; a few have a recognizable relationship to such well-known buildings as the Hilversum Bath House and de Kleck's Post Office at Amsterdam, some are just transplanted Latins and Teutons from Paris and Berlin, others again follow the tradition of the old Dutch farmhouses with their gables and pantiled roofs, one or two are freaks, and of the remainder a great number have a distinctly English appearance, though lacking the incommunicable charm of our best domestic work. At the beginning of the century English influence among the architectural students of the Technical High School at Delft was very strong, and Dr. Slothouwer has admitted that in his time the names of Ernest Newton, C. F. A. Voysey and Baillie Scott were better known than those of the Dutch architects of the past. Dr. Wattjes, who is Professor of Architecture at Delft, has written a polyglot introduction in Dutch, German, French and English, and his architectural outlook is more catholic.



Ground- and first-floor plans of the house illustrated above. Scale = 1 : 500. References : Ent = entrance; Wa = waiting-room; Ga = dressing-room; Ha = hall; Di = dining-room; Wo = living-room; Stu = study; Ser = serving-room; K = kitchen; Te = terrace; Sp = scullery; Per = pergola; Au = garage; Sl = bedroom; Ma = mangling or sewing-room; Ba = bath; Bou = boudoir.

[1] *Moderne Nederlandsche Villa's en Landhuizen.* By Professor Ir. J. G. Wattjes, B.I. Amsterdam: N. V. Uitgevers-Maatsch. "Kosmos." Price F. 17.50.

"Elly's Home," Huizen, Holland. Designed by J. P. Vos. The walls are of brick up to first-floor level, and weather-boarded above. The roof is thatched. A small terrace has been provided on the right of the chimney stack.

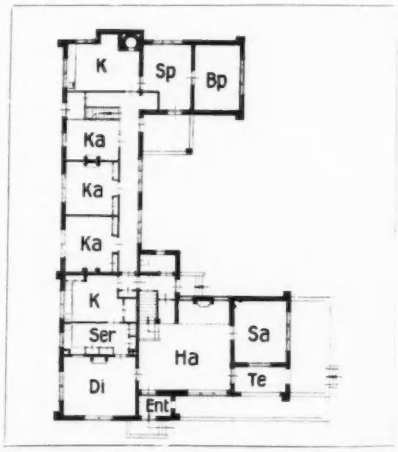
From Modern Cottages and Country Houses in Holland.]

The garden front of "Gaudeamus," Bilthoven, Holland. Designed by Frants E. Röntgen. The walls are of brick and the roof is thatched. The circular one-story projection on the left houses the music room.

He has chosen to illustrate all types of suburban and country houses, from the semi-detached villa to the large rambling plan, which in this country would cost about £4,000 or more to erect. No mention of prices is made throughout the book, which is perhaps a pity, for although at the present time exact comparisons in international

"De Dierik," Oudelande, Holland. Designed by H. A. J. and Jan Baanders. The walls are of brick and the roof is covered with tiles.

currencies are difficult, it would have been of interest to know whether a Dutchman paid more or less for similar accommodation than an Englishman. From the excellent plans it appears that the domestic requirements of the countries are much the same, and the owner of one of Ernest Newton's country houses would feel quite at home in Herr Arnhem's charming "St. Amaland," Vught, with its long low English roof-line and thatching. The method of finishing the thatch with a half-round tile at the ridge gives a hard line, but seems to be a common practice in Holland. Many of these thatched villas, with the long slope of the roof unbroken and with deep overhanging eaves, are pleasing examples, but the book contains, as well, illustrations of almost every crime that can be committed with this material.

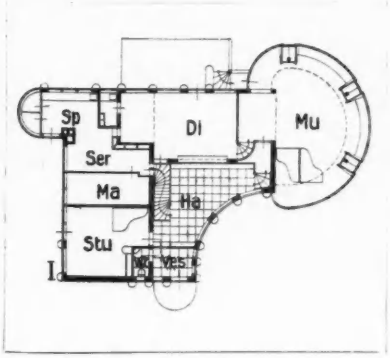


Ground-floor plan of the house illustrated above. Scale = 1 : 500. References: Ka = room; K = kitchen; Bp = storeroom or workshop; Di = dining-room; Ha = hall; Sa = drawing-room; Sp = scullery; Te = terrace.

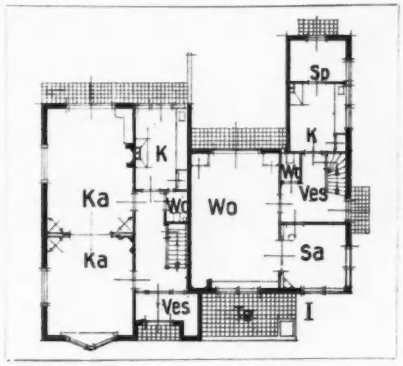
The invasion of the country by the town, due to increased transport facilities and begun in Holland some thirty-five years ago, is rapidly urbanizing districts which up till then had been entirely rural. The new garden suburbs of Rotterdam, Amsterdam and The Hague are well known, but although the author mentions the "villa park," there is no indication among these illustrations of any co-ordinated layout of an estate. In districts where the land is expensive, i.e., in the proximity of large towns, the houses are being erected to a greater height and are "divided by mere strips of garden." Such a prospect is not encouraging, and without co-ordination might result in a replica of some of the most depressing of late Victorian suburbs around London. But the Dutch architects who have done so many good things since 1918 are not likely to fall into this error.

Both type and plates are excellent. The binding, which has been designed by a Dutch architect, Herr Wiersma, is in keeping with the high standard of production.

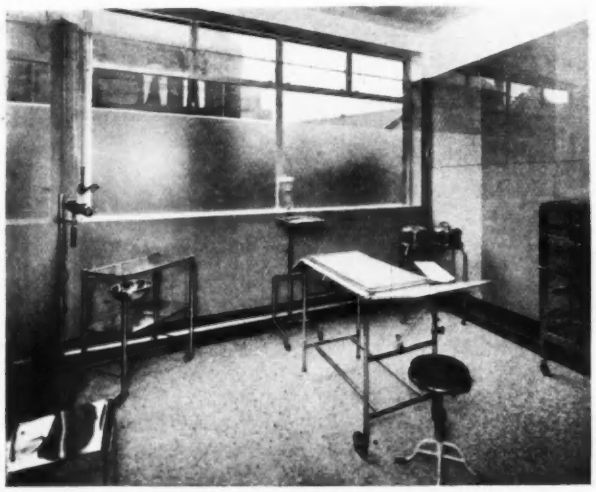
LL. E. W.



Ground-floor plan of "Gaudeamus," Bilthoven. Designed by Frants E. Röntgen. Scale = 1 : 400. See also facing page.



Ground-floor plan of "Elly's Home," Huizen. Designed by J. P. Vos. Scale = 1 : 300. See photograph on facing page.



The operating theatre by day. The large window is in steel, with opening gear controlling the upper panes. The floor is of terrazzo.

The operating theatre after dark. The walls of this and the anæsthetic room are lined with green opal glass. All angles are coved.

SURGERY FOR A FACTORY

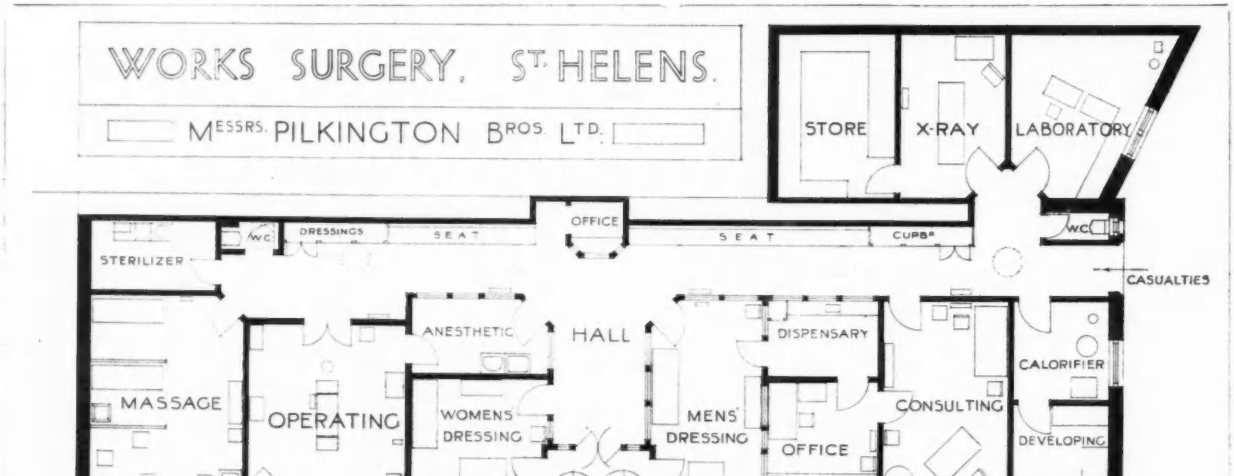
DESIGNED BY BIRAM & FLETCHER

THIS surgery has been obtained by converting an existing building and dividing it up as shown on the plan. A new flat ceiling was put in and the corridor lit with dome lights. The window sills were dropped to a lower level and windows with steel hopper vents and fanlights inserted. The window to the operating theatre is of steel, in two large lower panes and four upper panes with opening gearing. A new entrance doorway was formed in artificial stone.

The floors of the hall, corridor, operating theatre and anæsthetic rooms are finished in terrazzo; those of the store, calorifier and sterilizing rooms in granolithic; and those of the remainder of the rooms in triolin composition flooring on a bitumen base, both cemented down solidly with waterproof cement. The division walls are built in brick on edge in cement, with borrowed lights where shown.

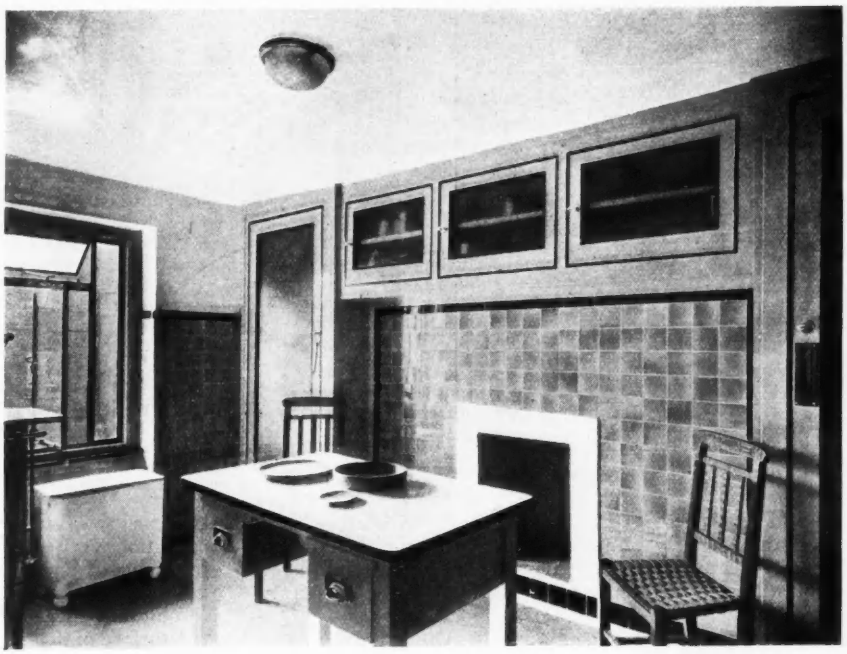
The operating theatre and anæsthetic rooms are lined with green opal glass, fixed to cement rendering with special mastic putty; all angles are coved with glass bent to radius. The hall and corridor, massage rooms, men's and women's dressing-rooms are lined to a height of 4 ft. with white opal glass, similarly fixed, and the borrowed lights are glazed with stippled plate glass. All walls have an 8-in. terrazzo skirting with coved angle to floor. All brackets carrying heating pipes and radiators project from the skirting. The remaining walls are finished in Keene's cement.

The heating and hot-water supplies are by low pressure from calorifiers fitted from the works steam mains. Radiators are of the hospital type and, where under windows, are fixed in recesses with white enamelled inlet vents. The ventilation is by extractors in the ceiling. The sanitary fittings are also of modern hospital type.



The plan. An existing building was modified as regards lighting, divided up, and lined and floored with modern materials.

EFFICIENCY IN THE KITCHEN



This view of the fireplace wall shows the disposal of a series of built-in cupboards surrounding the tiled recess.

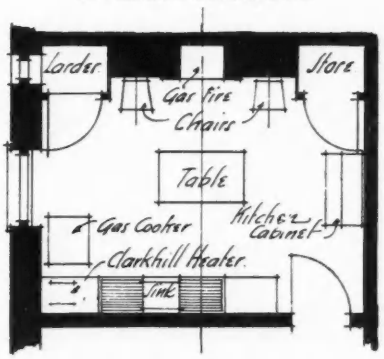
A Compact Modern Example in a London Flat

DESIGNED BY
G. ALAN FORTESCUE

THE importance of the kitchen in contributing to comfort throughout the entire house, and in making work more enjoyable and leisure more abundant for womenfolk, is today much more widely recognized than was the case even eight or ten years ago. In pre-war days the kitchen was sometimes despised and neglected; to-day the greatest possible attention is paid to this section of the modern house. It is planned so that work may be done with ease, in fresh air and a good light, and with as little running to and fro as possible; and it is fitted so that it may be kept spotlessly clean with the minimum of labour.

In the achievement of this reformation the architectural profession has played a leading rôle, and the utmost ingenuity has been devoted to planning such features as built-in cabinets and dressers, service hatches communicating with the dining-room, tiled recesses, and the installation of up-to-date plant for heating and cooking. Among the pioneers in this movement is Alan Fortescue, who has been responsible for planning many kitchens that have rarely failed to include features of utility and originality. The example here illustrated is part of a flat which the architect recently re-conditioned for his own use in Beauchamp Place, London.

This kitchen has a colour scheme. A cheerful tone of pale brown, putty colour and black are its chief components, the tiles which line the walls being of the first-mentioned hue, and the woodwork being putty-coloured, picked out with black. Above the dado, which is carried well up, so that any dirt marks or splashes may fall upon the tiled surface, the wall is finished in Keene's cement and painted white, the ceiling having been similarly treated. The door is of cathedral glass with flat iron bars painted black, repeating the black elements in the woodwork.



The plan reveals the forethought that has been taken to avoid unnecessary walking about.

Stainless steel is used for all taps, and also for finger plates on doors and cupboards; it may be noted, too, that the taps have square stainless steel bosses, which may be built into the tiled wall with convenience and produce an agreeable effect.

The kitchen cabinet is interesting. This is a Drytone model, but instead of being of limed or chemically tinted timber, as are most of the Drytone cabinets, this example has been painted with putty-coloured cellulose lacquer. The result is an article which not only harmonizes perfectly with the interior, but is exceptionally pleasing in itself.

The windows are hung on pivots, so that both sides of the glass may be cleaned from within the room. As the kitchen is on the second floor, above street level, this is no small advantage, and it is in any event a device which saves time and labour when cleaning windows, even if the kitchen is on the ground floor. There is also a hopper light for ventilation in winter.

The gas range is a Smoothtop model, and is fitted with a pilot light, so that gas may be turned on and lit instantaneously without having to strike matches; and a Clarkhill heater gives an abundant and speedy supply of hot water not only to the sink, but also to the bathroom on another floor. The draining boards at either side of the sink are removable.

The wall opposite that where the sink has been installed has a tiled recess with accommodation for a gas fire, for use

Among the fittings are a kitchen cabinet and removable draining boards to the sink.

The sink taps are of stainless steel, and the windows are pivot-hung, for easy cleaning.

if additional heating should be needed, and around this recess is an extremely serviceable arrangement of built-in cupboards with sliding glass doors.

The floor is covered with a high quality linoleum, and has a sub-floor of Linovent, giving greater softness and resilience to the tread. B. B.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

A Damp Wall Problem

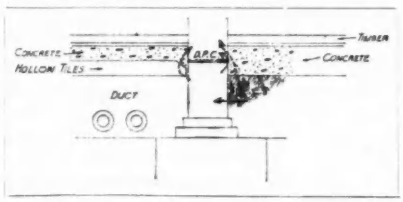
THE architect for a block of recently-erected flats requested the assistance of the Station in tracing the cause of dampness in a wall in one of the apartments on the ground floor.

An inspection carried out at the building by an officer of the Building Research Station showed that on one side of the affected wall was a solid concrete floor, finished with wood bearers and flooring, while on the other side was a pipe duct with a hollow tile and concrete cover, also finished with wood bearers and flooring. (A sketch, supplied by the Building Research Station, showing the construction, is reproduced on this page).

It is obvious from our inspection that the trouble is most probably due to the capillary rise of ground moisture at the point where the concrete is in contact with the wall above the damp proof course; the arrows on the sketch indicate the manner in which it is thought that the moisture is rising. It is, perhaps, not generally realized that even a dense well-made concrete may not be a barrier to the capillary movement of moisture, although the amount actually transmitted may be small. The fact that one flat alone is affected may be the result of some peculiarity in the distribution of ground moisture on the site : in this connection. it is observed that the corner of the building where the flat is situated, appears to be at a rather lower level, in relation to the general ground level, than the rest of the building.

To prevent the rise of moisture in the walls, it will be necessary to provide a vertical damp course; this might be satisfactorily accomplished by cutting a chase in the concrete adjoining the wall to a depth sufficient to leave the full thickness of the damp proof course exposed, and filling up the chase with hot bitumen.

With the construction as carried out, the floor timbers are also liable to



A sketch showing the construction of the wall referred to in a query on this page.

become saturated with moisture, a condition very liable to result in an outbreak of dry-rot, and it would be advisable to introduce some form of insulation between the timbers and the top surface of the concrete. A bitumen coating would probably provide satisfactory insulation from moisture, but to be effective it would be necessary to ensure that the layer of bitumen over the concrete is continuous.

Watertightness of Brickwork

An engineer inquired about the comparative watertightness of brickwork built in lime mortar and cement mortar.

Throughout recent literature there have been numerous references to this subject. For example, a summary of investigations carried out at the Mellon Institute of Industrial Research (America) is given by F. O. Anderegg in the American *Architectural Record* for September, 1931. In this article it is pointed out that lime mortar has greater "flexibility" than cement mortar; the latter imparts rigidity to a structure, but this, in brickwork, is unnecessary, and may be harmful, since cracking is more liable to occur. Lime mortars, however, are more absorbent than mortars containing cement, and are less weather resistant. Percolation of moisture through brickwork seldom occurs in the first place through the body of the brick or through the mortar, but more often by way of depressions in the mortar surface in contact with the bricks, caused, apparently, by incomplete wetting of the brick by the mortar, or by too rapid moisture removal while the mortar is still plastic. Since the erection of a watertight brick wall is well-nigh impossible because of the human element involved in bricklaying, it is

advocated that, in exposed situations, cavity construction, the use of hollow building units, or the erection of furred-out internal renderings should be adopted. Mention is also made of a school of thought which advocates the use of materials permitting comparatively easy absorption, and consequently, quicker evaporation, precautions again being taken to insulate the internal renderings from the body of the wall. It is suggested by the investigator that the most suitable all-round building mortar is a lean lime mortar, gauged with cement and containing a clean well-graded sand.

From the limited number of experiments carried out to date at the Building Research Station there is some evidence, generally that brickwork in which a moderately hydraulic, lime-sand mortar has been employed is rather more resistant to water-penetration than that in which a cement-sand mortar has been used. The first penetration in either case has been observed to occur at the bottom of the vertical mortar joints.

Recurring Rot in Timbers

A firm of building contractors was called upon some time ago to replace a wood floor where an outbreak of rot had been discovered. The floor was of wood flooring-boards on sleeper joists, resting on a sleeper wall, and was ventilated in the usual manner by air gratings in the outer walls and openings in the sleeper wall; the centre portion of the floor was covered with carpet and the room had a linoleum surround. The decay was confined to the section of the floor adjoining a party wall having a projecting chimney-breast and hearth walls. Although every precaution against a recurrence of the trouble was taken, the rot broke out again in the new timbers.

Trouble of this kind is by no means uncommon, and it is considered that it is primarily due to a lack of efficient ventilation in the recess formed by the projection of the chimney breast and hearth. In a serious outbreak of dry rot recently investigated by the Station, and where some hundreds of houses were affected, it was found that in nearly every case the rot had commenced in exactly the position described in this instance. The remedy in a case of this nature lies in the provision of an air passage under the hearth to avoid the formation of a stagnant air pocket in the recess. The insertion of a 6-in. drain pipe under the hearth will probably effect considerable improvement.

The use of linoleum frequently gives rise to trouble of this kind, since it is so impermeable that any condensed moisture is unable to evaporate into the air of the room. If, in this case, it were possible to dispense with the linoleum surround where moisture conditions are troublesome, this would be highly advantageous.

The subject of dry-rot in wood has been dealt with comprehensively in Forest Products Research Bulletin No. 1 (H.M. Stationery Office, price 1s. 6d. net), and it is suggested that this publication may be found helpful.

In renewing the timber, where there has been an outbreak of dry-rot, it is particularly desirable to apply a preservative treatment to the new wood. Thorough impregnation with the preservative is to be recommended, as brush-applied coatings have been known to fail to prevent further infection.

Corrosion of Lead Pipes Embedded in Clay

A firm of builders engaged in the development of a housing estate had experienced repeated failures of lead water-supply pipes embedded in a virgin clay soil. In each case the pipe was found to be severely corroded, in some instances to the extent of the full thickness of the wall of the pipe. A section of the corroded pipe was submitted by the builders, together with a request for the opinion of the Station on the probable cause of the corrosion and a note of any preventive measures which could be taken.

An examination of the corroded pipe showed that the corrosion product was of the lead carbonate or white lead type, that is, of the kind produced by the action of organic, acidic substances on lead. In certain soils, such as peaty soils, clays containing comparatively high proportions of organic matter, and made-up ground containing coal residues, serious corrosion of embedded lead is liable to occur, the organic acids contained in these soils acting on the lead and resulting in the formation of lead carbonate. Apparently, in this instance, the clay soil in which the pipes were embedded contained sufficient organic acids to corrode the lead seriously; several instances of this type of corrosion have previously been reported to the Station.

Since it is obviously impossible to expect the normal life from lead pipes embedded in this clay, the insertion of some form of insulating medium between the pipe and the soil seems advisable; to pack round the lead pipes with chalk, limestone, or old, well-carbonated mortar would probably give beneficial results, though at future renewals it might be better to lay the pipes in wood troughs and fill in with bitumen or tar, or, again, the use of felt strips impregnated with bitumen and wrapped spirally round the pipes, would probably provide adequate insulation.

Much useful information regarding the causes of corrosion of lead in buildings and its prevention is contained in the Building Research Technical Paper No. 8, *The Corrosion of Lead in Buildings*, and Building Research Bulletin No. 6, *The Prevention of Corrosion of Lead in Buildings*.

Putty for Glazing in Steel Sashes

An architect had been experiencing trouble with the putty used for glazing in steel sashes. His specification called for a genuine linseed oil putty, and, although he could neither find fault with the quality of the putty used nor with the workmanship, the putty on some of his recent work had failed to harden and presented a rippled appearance. He inquired whether it was possible to suggest the cause of this trouble and how to overcome this deficiency in future work.

It is known that in certain cases additions are made to putty to prevent hardening, particularly where large individual panes are glazed, or where considerable temperature movements are to be expected. It is possible that a non-hardening putty of this type had been used on the work. Alternatively, the use of an excessive quantity of linseed oil would result in a soft putty, for which the normal small amount of hardening in the form of a surface skin would be inadequate, particularly in steel sashes, since, with these, there is no absorption of the oil, as in the case of wood sashes. The addition of gold-size is sometimes made to increase the rate of hardening of a putty; though its use may be quite effective in this respect, its inclusion increases the shrinkage of the putty, and the practice is one which cannot be recommended.

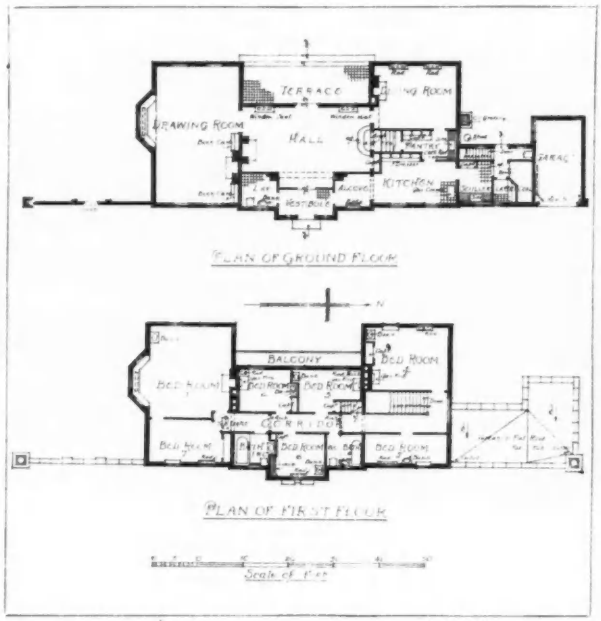
For use in metal frames, the addition of a hardening agent to a putty is desirable. White lead and red lead are often used for this purpose, and a good putty for glazing in steel sashes can be made by adding about 10 per cent. by weight of one of these substances to ordinary linseed oil putty, the desired plasticity being restored, if necessary, by a small addition of turpentine. If this mixture is used at a fairly stiff consistence—rather stiffer than that ordinarily used for glazing in wood frames—and the metal frames have been painted at least a few days previously, good adhesion and satisfactory hardening should result. After a few days the putty should receive one or two coats of paint to give a surface hardness, and at the same time to prevent excessive hardening of the underlying putty.

Research Laboratories

Sir Frank Smith, Secretary of the Department of Scientific and Industrial Research, lecturing last week on "Chemistry and the Community," at a meeting of the Institute of Chemistry, said it was worthy of note in these times of industrial depression that the most prosperous industries were those which maintained adequate research laboratories and strove continually to acquire new knowledge and to manufacture new products. It was significant that there could be but few cases (he knew of none) of failure of a firm which had adopted such a policy.

TWO HOUSES AT FOLKESTONE, KENT

DESIGNED BY J. SEATON DAHL



"MARINERS"

The garden front; and ground and first-floor plans. The walls are of hand-made, sand-faced, multi-coloured bricks, with cherry quoins and plinth. The roof is covered with local hand-made, dark, sand-faced tiles.

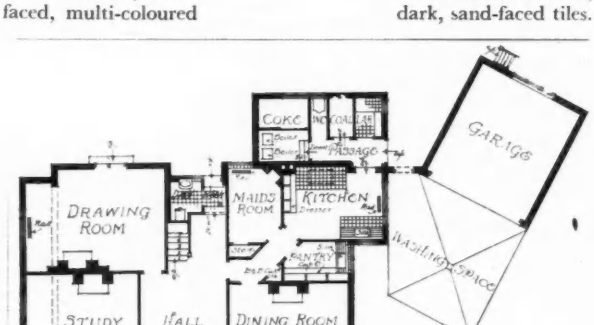
ON this page are illustrated two examples of domestic work by Mr. J. Seaton Dahl.

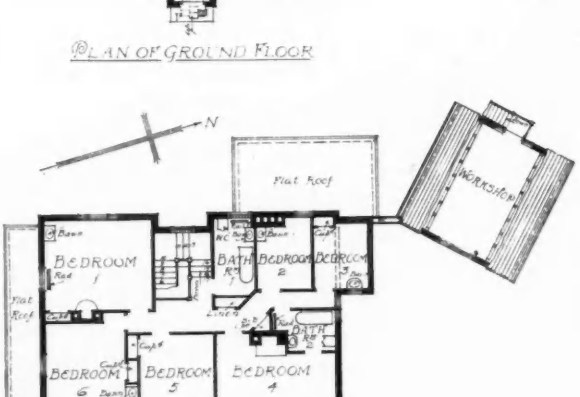
It will be noted from the ground-floor plan of "Mariners," above, that access to the front door is obtained without entering the hall, which forms a third sitting-room. There is a large nursery in the attic, with the doors leading on to the flat roofs, for the children.

"Pelham Court," illustrated below, is fitted with separate boilers for the domestic and central heating, which, can be coupled up by means of valves, and one boiler, in mild winter weather, used for heating purposes. This is possible as the domestic supply is on the indirect system, with a coil in the cylinder.

"PELHAM COURT"

A general view of the entrance front; and ground and first-floor plans. The materials used for the walls and roof are the same as those incorporated in the house illustrated above.





THE FUTURE OF DOMESTIC ARCHITECTURE

BY DARCY BRADDELL

THEORIES today have no time to become absorbed and matured by any one nation and become part of its recognized being, much as Dutch architecture became absorbed in England, to be known now as "William and Mary." They become the common property of all nations instead. Some die a very rapid death, and that is because they are only fashions and bear no direct relation to life, like the Art Nouveau of the early days of this century and the Gothic revival of the last. Others, on the other hand, have come to stay and flower into something that can be called a definite style. Of this class is mechanism.

National Life

The national life of each country outside of the Far East is becoming daily more and more alike, because people of all classes are beginning to want exactly the same things. That is caused by intercommunication of ideas and the rapid spread of democracy. If you travel in Europe today, you see everywhere the same clothes, you hear the same music, dance the same kind of dance to it, and eat the same food. You see the same kind of things in the same kind of shops; for example, it is quite impossible to find anything novel in the way of furnishings for the house which you have not already seen somewhere else. The recent exhibition at Stockholm, the home of tradition, had exactly the same steel tube furniture as can be seen in London, Paris and Berlin.

Every big movement in art has been based on some universal desire of mankind. Humanism and the determination to be free from the shackles of the church were the real causes of the Italian Renaissance, not the discovery of the remains of antique sculpture and architecture. So, today, we have the birth of mechanism, because the world, particularly the young world, is passionately interested in mechanics. The moment man is really interested in anything he makes, he becomes serious about it, and sooner or later understands it. With true understanding will come beauty.

Evolution of the Motor Car

Consider for a moment the case of the motor car. It began designed exactly like a horseless carriage. Then it gradually began to change its lines to fit themselves into its function. Now a car is probably as satisfactory an object to look at as anything that is made today. Exactly the same reasoning might be applied to the design of our future houses, were it not that a house is a far more complex thing than a motor car.

All through the nineteenth century only fashions not styles were made, because mankind, not realizing what machinery really meant, was still thinking in terms of an age when there was none, just like the early motor car designers thought of horse carriages. But the world is changing and the machine has come into its own. So our houses are going to change, and a true new style is beginning life.

We have a new material—reinforced concrete. When this method of building was first used, it made no change in the architectural tradition in vogue. Buildings showed from their external handling no suggestion that they were constructed in a new way. The amazing potentialities of reinforced concrete were completely ignored. All the old treatment of pilasters, pediments, cornices, was still clung to with tenacity during the first few years. Then gradually a change came over the scene, and a school sprang up in Europe with entirely fresh views as to the proper usage of reinforced concrete.

The New Materials

It argued that an entirely new material must have an entirely new method of design, that it was absurd to shackle it with the conventional treatment that bygone ages had given to stone and brick. This school began by flying to the other extreme and denying all ornament to its building—that is to say, extraneous ornament that could in any way be associated with the past—and relied entirely on mass and proportion of solids to voids and that sense of pleasure that an engineer will have in the purely functional, to give whatever interest its buildings were to possess. It further argued that a window was intended to look out of, and the world now being capable of rolling a sheet of glass of almost any size, it was clearly ridiculous to cut that glass up into small window panes. It put aside, not only the accepted ornament, but traditional canons of good design in stone or brick buildings, as, for instance, the necessity of supporting overhanging projections, such as balconies, with some visible means, and the leaving of the corners of a building as solid piers to give real and visible strength.

Le Corbusier was, I think, the first man to introduce the angle window which deliberately cut away the external angle and left it a series of jags like a dovetailed joint. His example has been extensively followed all over Europe. The new style precludes any form of pitched roof that is not behind a parapet and consequently hidden, because a tiled or slated roof that can be seen savours too much of the past, and the new school was determined that, whatever else might be said of it, it was not going to be accused of anything like traditionalism.

Together with concrete and glass, another material is now to hand, and that is stainless steel. This last is clearly going to play a very great part and may help the modernists out of their roofing difficulties, for there is no good denying that being tied to a flat roof is a great handicap in a northern climate. Stainless steel, of course, has still to be proved and certainly has not arrived at the state where it can be used for such purposes as I suggest, but I believe the time is not far away when it will be so used.

The New School

Nobody is going to quarrel with the arguments of the new school. They are quite sound as far as they go, but the trouble is they do not go nearly far enough. They are much too limited. Like all theories based on nothing but logic, they will not satisfy the needs of that complex animal, man.

As a case in point, the mechanists will argue something like this: If you want to design a balcony to one of your houses, the best and only way to make it is to project a slab of reinforced concrete as thin as is safe, and then, to protect yourself from falling off, to erect round it a dwarf wall of concrete. There is not the slightest necessity to ornament this wall. So long as it fulfils its function of protection, that is all that is demanded. In other words, the function only of any feature dictates its design. By this means, they will tell you, simplicity is achieved. Directness, yes; but not simplicity, because that is the result of a deduction from riches within. The Parthenon is a simple building, but it was not arrived at by thought on these lines. When primitive man made his first timber dwelling, he did not achieve simplicity, but only directness; and that is all, in my judgment, that these mechanists have done so far. I think they are perfectly right to say that the time has now come to realize that we live in a new world with new building materials, and that it is no good applying to these materials the worn-out traditions of others. I also agree with them that

Extracts from a paper read by the author at a meeting of the Sheffield, South Yorkshire and District Society of Architects.

they have got to go right back to the very beginning and start with fresh principles, but where I do *not* agree with them is that there are no lessons to be gained from a study of the past, and that the architecture of yesterday cannot help in any way that of today. A house is not, and never can be, quite in the same category as a motor car or an aeroplane, and the æsthetics of one can never entirely be applied to the other. Imagine if you went to China, for instance, and saw the Chinese building houses exactly like the English, you would be shocked beyond expression, and rightly so, because you would say, "these people have nothing in common with us, their whole conception of life is different. Why then do they build their houses like Europeans?" But on the other hand, if you saw a Chinese aeroplane you would not expect it to look any different from an English one. And that is the weak spot of the arguments of the present-day mechanists, it seems to me. Man is too old to cast aside, like worn-out clothes, all the experience he has gained in making a house. It is too much to ask of him; and, passionately interested in machines as he is, he is not one himself.

Danger of Mechanism

Another very great danger I can foresee in this present phase of mechanism is that hundreds of people will try it and not understand in the least what they are doing, and some very dreadful little houses will result. Perhaps you will say "no more dreadful than the houses built by ignorant practitioners in other days." Nearly two hundred years ago Pope wrote these lines to Lord Burlington :

Yet shall, my Lord, your just, your noble rules,
Fill half the land with imitating fools,
Who random drawings from your sheets shall take
And of one beauty many blunders make.

LAW REPORT

STREET IMPROVEMENT : CLAIM AGAINST BOROUGH COUNCIL

Foster v. *Woolwich Borough Council. Chancery Division. Before Mr. Justice Eve*

THIS was an action in which Messrs. Walter Laurence Foster, Douglas Marley Foster, and Horace Gibbard Foster, estate agents, of Blackwater and Lewisham, where they trade as Foster and Foster, the owners of freehold land on which formerly stood 136 to 140 High Street, Eltham, and certain houses in Pound Place, Eltham, part of which had been transferred to the Woolwich Borough Council for the purposes of widening Eltham High Street, claimed damages against the Council for alleged breach of a covenant of July 30, 1928, to demolish the buildings, clear the land of all materials and rubbish, and to widen and pave the footway and make up the road with all reasonable expediency.

Mr. Galbraith, K.C., and Mr. Blanco White appeared for the plaintiffs, and Mr. Morton, K.C., and Mr. Hodson for the defendants.

Mr. Galbraith stated that the negotiations for the land took place in 1926, and in July, 1928, it was transferred, the price being £1,000. The Council undertook to obtain vacant possession of the land and demolish the buildings and clear the site, so that the new building line would be available for the plaintiffs' shops on or before November 8, 1928, and that they would proceed with the work of widening and paving the footway and making up the road with all reasonable expediency and without cost to the plaintiffs. The Council had obtained possession of the land, but had made delay in the paving of the footway, which was only partly done, and making up the road, where practically nothing had been done. Through this delay the plaintiffs had suffered substantial loss.

Mr. W. L. Foster estimated the loss that the plaintiffs had suffered at over £800 a year.

Mr. Morton, for the Council, submitted that on the true construction of the deed of July, 1928, there had been no breach of contract by the Council, but if there had been any breach, no damages had been proved. What the Council consented to do was to demolish the buildings and clear the land so that the new building line would be free by a particular date. He submitted that the Council had done their part so long as they removed everything which prevented the plaintiffs erecting their shops. Plaintiffs could have built at any time. The Council's case was that it was not expedient to widen a street in patches, and that they had done the paving with reasonable expediency, having regard to the obstructions placed there by the plaintiffs' contractors. He further submitted that the damages claimed were too remote.

JUDGMENT

His lordship, in giving judgment, commented on the fact that the buildings in question were very old buildings, and they were found to be in an unsatisfactory condition, and the defendants' engineer came to the conclusion that one of the walls would collapse if something were not done. He therefore decided to leave the chimney breast as a support. If this support had not been left, it would have been necessary to secure the wall. There were other interests to acquire besides the plaintiffs', and this took time. The widening of the road was accordingly a long process owing to the various interests concerned. It could only proceed, if any regard was to be paid to expenditure, when a long and continuous stretch of the road could be completed, and it was a matter of uncertainty when the widening of a particular stretch could be put in hand. The question of whether or not there had been a breach of covenant fell to be determined on the construction of the covenant. Did the non-removal of the chimney breast, of which the plaintiffs complained, involve a breach of covenant? The non-removal of the chimney breast did not interfere with the plaintiffs' building line, and therefore, in his lordship's opinion, the defendants were entitled to succeed on the construction of the covenant.

In any case, the plaintiffs would not be entitled to more than nominal damages, but in view of the construction he had put on the covenant the action on this issue must be dismissed. The plaintiffs alleged a cause of action against the defendants for not having made up and paved the footway with all reasonable expediency. But his lordship had to bear in mind that there had been many obstacles to be overcome by the defendants, and there was a long correspondence, which closed with a letter from the Town Clerk explaining the position. Then the writ was issued.

Plaintiffs complained that they had suffered at the rate of about £800 per annum. The plaintiffs had contended that all reasonable expediency was with all reasonable expedition. His lordship did not agree. So long as the defendants acted reasonably was all he had to consider. There was no evidence that the defendants acted otherwise than reasonably, and they widened and paved the footway as soon as requested by the plaintiffs.

The plaintiffs had failed to establish any cause of action against the defendants, and he dismissed the action with costs.

Northern Polytechnic

At the end of this year Dr. Clay is resigning the principalship of the Northern Polytechnic, a post he has occupied for twenty-nine years. The governors, staff, students and members of clubs and societies who have been associated with him during this period wish to assist in offering some token of their regard and affection. A committee has been set up to give effect to this general desire. Old students and others who would like to contribute are asked to send their donations to W. M. Macbeth, hon. treasurer of the committee, Northern Polytechnic, Holloway, London, N.7.

THE SPECIFICATION WRITER

Substituting Electric for Coal Heating

A striking example of the progress which is being made with the electric heating of buildings is the electrical installation just completed at the Royal Scottish Automobile Club, Glasgow.

Until recently the heating of the building, the domestic hot-water supply and the supply of steam for the kitchen were all obtained from a central Cornish boiler, but, as time passed, this was found to be insufficient for the work, and something had to be done to improve matters. Situated as the boiler was, in the centre of the buildings, it was clearly a difficult matter to increase its size, and, for that matter, the only possible place for another boiler, either for oil or coal, was in the space now occupied by the club garage—a space which has considerable value to the club as a convenience for members. It was here that electricity came into its own, because, without any trouble whatever, the electrical equipment has all been placed in the small space hitherto used for coal storage and for firing the boiler, and no longer required for that purpose.

The electrical equipment has been installed under the direction of J. Campbell Murray, M.I.E.E., of Glasgow, and has been designed so that the minimum space is taken for the apparatus itself, while the existing plant is made use of to its fullest extent; and the change over from coal to electricity was effected without inconvenience or, in fact, without the members or domestic staff knowing that it had taken place.

The diagram gives a general idea of what has been done. The existing Cornish boiler was converted into thermal storage for the domestic hot-water supply by blanking up the furnaces and inserting a steam coil (1) at the bottom; this is heated at night by either of the two boilers (A) or (B), which are of 150 and 350 kw. respectively, to the desired temperature. In order to reduce the heat losses in circulating, the temperature of the water in the piping is kept down to as low a point as is consistent with good service by means of a mixing valve (5), and while the temperature is adequate for wash basins and baths, it is not so for kitchen purposes. A second existing storage is therefore used, also heated by either of the boilers (A) or (B) during the night up to a temperature of 200° F. Both storages are controlled automatically in that a steam valve (3) closes when the storage (2) is hot and a thermostat stops the boiler pump and so shuts down the boiler itself when the main storage is up to temperature.

The hot-water supply to the kitchen is thus taken in the first place from the special kitchen storage, and in the second place from the main storage, while any emergency steam can also be taken from the boiler, which is running during certain hours of the day for providing steam for the kitchen cooking equipment. This consists of :

4 boiling pans.
2 steaming ovens.
1 steam oven, 6 ft. by 3 ft.
1 hot closet, 20 ft. by 3 ft. by 3 ft.
3 urns.
2 washing machines.

Steam cooking is the popular method because of its quick results and easy manipulation, and the small electrode boilers, with their quick steam-raising and automatic control, are very suitable indeed for this work.

The boiler for day work has the ordinary patent controls, so that the steam supply and pressure are regulated by the steam demand, and, in addition, if the steam demand decreases and the pressure rises, the feed pump is automatically stopped to shut down the boiler. The beauty of the system is that the steam output automatically regulates itself to meet the demand of the moment, and as steam is required for more or fewer cooking pans, the load on the boiler is opened out or shut off, so that no more steam is generated than is actually required, and if none is wanted, none is supplied or paid for. The second boiler is left connected to the storage control and automatically starts up with a time clock, shutting down when the storage is up to temperature. As will be seen from the diagram, the condensed steam is returned to the main feed tank and the heat units therein saved.

The heating of the building is on more simple lines. A 250 kw. electrode circulator (C) is joined directly on to the existing heating system, the hot water passing through the pipes (6), radiators (7), and return pipes (8), accelerated when necessary by a motor-driven pump (9). This circulator is controlled in the main by water thermostats and contactors and the load altered between 50 kw. and 250 kw. maximum to meet actual needs. The radiator circuits are themselves controlled by magnetic valves and room thermostats to keep check on the room temperatures, which in practice reduce the running costs to a considerable extent, with an improvement in the general comfort of the building.

The existing calorifier (10) through which steam was taken from the Cornish boiler has been retained as an auxiliary if and when the main circulator requires attention.

The photograph, which was taken under considerable difficulty owing to the narrow space, and is very foreshortened, shows the two steam boilers in the front, the 250 kw. circulator midway and, at the back, the existing Cornish boiler before being lagged. It gives particularly well the diminutive size of the electrical equipment in comparison with that for coal.

The method of changing over adopted was, first, to instal the two boilers and circulator, heat being provided in the building through the auxiliary

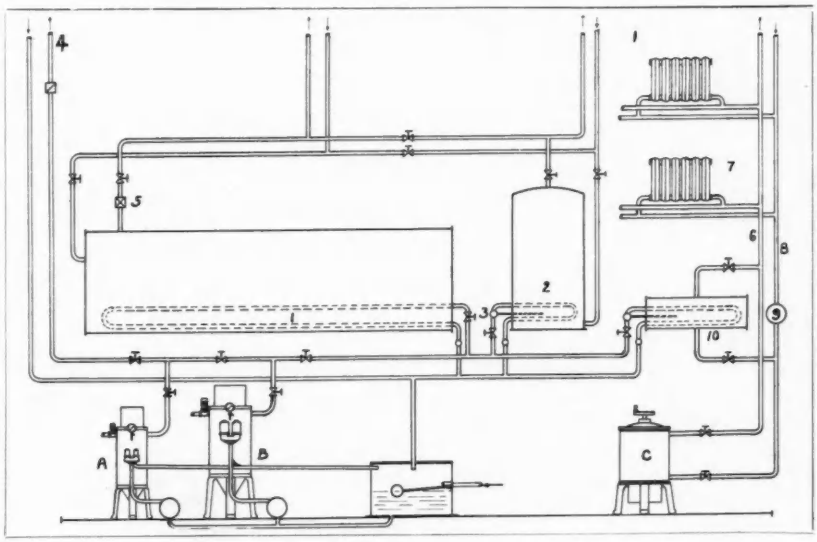
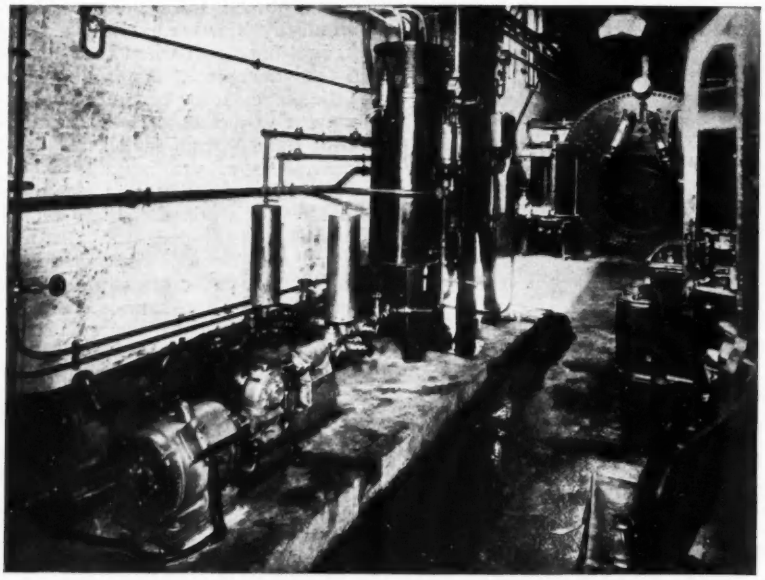


Diagram of the new electric water-heating installation at the Royal Scottish Automobile Club, Glasgow, described on this page.



By courtesy of Bastian & Allen, Ltd.

The installation, including, in the foreground, the two new electric boilers, and, in the background, the old Cornish boiler.

calorifier (10) while the circulator was joined up, and the domestic supply taken from the kitchen storage. The Cornish boiler was then altered and joined up, the whole being effected without material interference.

As will be seen, there is no thermal storage for the heating, but in a building such as this it is preferable to have a smaller amount of heat continually day and night, while the residual heat in the system and building is sufficient to cover any short peak load. The rates given at present are £10 per kw. per annum, lighting demand; thereafter, the current taken is charged at power rates—½d. per unit during the day and ⅜d. by night. The equipment was installed by Bastian and Allen, Ltd., of London.

SOCIETIES AND INSTITUTIONS

UNEMPLOYED IN BUILDING INDUSTRY

THE following letter has been addressed by the President of the R.I.B.A. to the Prime Minister, together with the extract from the Prime Minister's speech to which Dr. Unwin refers :

DEAR PRIME MINISTER,

I wish on behalf of the Royal Institute of British Architects to express to you our gratitude for the pronouncement made by you in the House of Commons on December 9, and recorded on pages 1915 and 1916 of *Hansard*. This statement in regard to the danger of unnecessarily arresting all kinds of work, and thus adding to the extent of unemployment, has forestalled a letter which was about to be sent to you asking for just such a statement to be made.

The Institute have been much disturbed at the extent to which building operations were being arrested and unemployment in the building industry increased. May I venture to hope that your valuable statement, which, unfortunately, was not reported in all the papers, will be brought to the attention of Government departments, local authorities and other bodies concerned. It only remains for me to thank you on behalf of the building industry for having set out the position so clearly.

Believe me,
Yours faithfully,
RAYMOND UNWIN
(PRESIDENT OF THE R.I.B.A.)

The Right Hon. J. Ramsay Macdonald, M.P.,
Prime Minister,
10 Downing Street,
Westminster, S.W.1.

Following is the extract from the speech by the Prime Minister in the House of Commons on December 9, 1931 :

I would emphasize to the House and to the country that the action which the Government took, and which the last Government took, was forced upon them by the national conditions and had to be taken swiftly. May I offer one word of warning both to individuals and public authorities ? I hope that this cry of economy is not going to be made a stunt.

I repeat that I hope that this cry of economy is not going to be made a stunt. There are too many people, both private individuals and public authorities, who imagine that simply by cutting down expenditure they are doing a service to the nation. There are circumstances under which a cutting down for the sake of cutting down is, especially at this moment, the greatest disservice that people can do to the nation. The most uneconomic place for money is a stocking, and the most uneconomical use for capital is to fail to find employment for the working man. Therefore, the policy of public authorities and private individuals, while economical and while following the same rules that we have had to lay down for ourselves, must always have regard to the relative value of cutting expenditure and reducing demands for labour; and, unless every public authority proposing to cut down examines its proposals from that point of view, it may not be giving the assistance to the nation which we all wish it to give.

MANCHESTER SOCIETY OF ARCHITECTS

"Internal Decoration" was the subject of an address by Mrs. Edward Maufe at a meeting of the Manchester Society of Architects, held on December 9.

Mrs. Maufe first mentioned some of the problems left by the architect for the person responsible for the furnishing of the rooms. It frequently occurred that in windows with semi-circular heads there was no seemly way of hanging the curtains, and the necessity for forethought in this and other matters was emphasized.

The lecturer then discussed internal design and decoration in general, showing the characteristics of town and country rooms. The elimination of the unnecessary appeared to be Mrs. Maufe's watchword, and some of her most interesting photographs were of very successful rooms with the minimum of decoration.

Mrs. Maufe showed the ease with which carpets could be obtained in any specially desired design, at moderate cost, making it unnecessary to use Oriental carpets in every position irrespective of their suitability, and also deplored the comparative neglect of the use of curtains as a decorative motive in this country.

Mr. J. R. Adamson proposed, and Miss Sadie Speight seconded a vote of thanks.

WELSH SCHOOL OF ARCHITECTURE

Mr. Percy Thomas, O.B.E., F.R.I.B.A., presiding at the annual prize distribution and exhibition of designs of the Welsh School of Architecture, held at the Technical College, Cardiff, on December 10, said the standard of work this year was even higher than it had been in the past. He advised students not to be discouraged nor to forsake the profession if they found it difficult to secure a post. Theirs was not the only profession suffering through the bad times, and they must all hope for a return to prosperity.

In his address on the work of the school, Mr. W. S. Purchon, A.R.I.B.A., said such had been its development from small beginnings (it was opened in March, 1920) that they were now working as one of the leading schools in the scheme administered by the R.I.B.A. Their examinations were recognized as exempting their successful

students from the whole of the examinations leading to the Associateship of the R.I.B.A., including, for the first time, the subject of Professional Practice.

Referring to the policy of the school, Mr. Purchon said they were not striving at specialization in one direction, but rather were they aiming at a thoroughly well balanced scheme of architectural education. They were trying to build up that scheme on as uniform and as sound a foundation as possible, and were endeavouring to base their work in design on a sound knowledge of the theory of design, of the best work of the past, of modern requirements and of modern construction, both theoretical and applied.

The Mayor of Cardiff (Ald. C. W. Melhuish) presented the prizes and diplomas to the successful students.

A vote of thanks to the Lord Mayor and to Mr. Percy Thomas was proposed by Mr. J. Herbert Jones, F.R.I.B.A. (President of the South Wales Institute of Architects), and seconded by Councillor Frederick Jones, Chairman of the Technical College Committee, supported by Principal Charles Coles, B.SC.

THE CHARTERED SURVEYORS' INSTITUTION

On Wednesday last the annual dinner of the Chartered Quantity Surveyors' section of the above institution was held at Edward VII. Rooms, Hotel Victoria, London.

Mr. Oswald Healing, the chairman, proposed the toast of "Architecture, Engineering and the Building Industry." In grouping together for that purpose the three great callings of engineer, architect and contractor, he said they desired to acknowledge and emphasize the essential contribution that each made to the success of the building industry.

The great changes which had taken place during the last twenty or thirty years in methods of construction, and the improvement in the quality of manufactured materials, had made possible the erection of buildings of a character never before attempted. In the case of reinforced concrete and steel-frame buildings, for instance, there had been evolved an architectural technique suitable for those particular constructions which had produced some notable and dignified elevations. Architecture was an art which had its roots in tradition, but those traditions were innovations at one time. So we found that what would yesterday have been heresy to the critics was today mere orthodoxy.

The engineer had made possible this revolution in building methods by his examination and determination of the scientific principles upon which design of those constructions was based. Thus, valuable work had been done by the Steel Structures Research Committee under the chairmanship of Sir Clement Hindley. The code of practice for structural steel which that committee had produced should go far to remedy the lack of precise knowledge upon which our present building laws were based, and, it was hoped, would eventually lead to their revision.

Another committee had just been appointed, with Sir George Humphreys as chairman, to deal with reinforced concrete structures on the same lines, by reviewing the present regulations governing this construction and making recommendations for a code of practice which would embody the best available technical information and the results of recent experience.

It might confidently be expected that both these committees, set up by the Department of Scientific and Industrial Research, would be able to make recommendations which would lead to the simplification of practice and more efficient and economical design.

The decisions which had recently been taken by Government Departments and local authorities to curtail building and public works indicated a policy which would undoubtedly have a very serious effect both on the building industry and on the trading public. The estimated cost of schemes which had been postponed or abandoned amounted to nearly £40,000,000. It was to be feared that the first results of such curtailment would be to create widespread unemployment in the building trades, with corresponding increased charges on the national exchequer for unemployment benefit.

Another equally urgent consideration was that, while it was recognized that national economy was a vital necessity, the desired result would not be achieved by cutting down expenditure on schemes which would be revenue-producing or which would contribute to the re-establishment or extension of other industries. Industrial development depended to a great extent on a wisely chosen programme of public works—roads, harbours, housing. No industry expected or desired that public money should be expended on non-productive undertakings, but properly planned national constructive works in the improvement of industrial facilities were essentially revenue - producing. The prosecution of a far-sighted policy for fostering our home industries was of the essence of constructive statesmanship; and it was earnestly suggested that one of the first questions to be decided was, not so much whether we could afford the immediate outlay involved in constructing these public utility works, but could we afford to stop them.

Mr. Sydney Tatchell, V.P.R.I.B.A., in responding to the toast, said that architecture was too large and too serious a subject to be dealt with adequately in the brief moments of an after-dinner speech, although he had no doubt many of his younger brethren would cheerfully accept the responsibility.

One, perhaps, would assert with all the confidence of youth that architecture could only adequately be expressed in terms of bent wire and glass furniture; whilst another, equally confident, would extol the virtues of horizontal masses of concrete, supported, apparently, by horizontal sheets of plate-glass.

Yet another youthful enthusiast would argue that the architecture of today should find its expression not in horizontality but in verticality. He would probably use the phrase "modernism," and would enlarge upon colour values.

A fourth exponent would combine the efforts of all the others and assert that the only architecture worth having was in the form of a draught-board, in which horizontal and vertical lines were equally distributed; that your colour values could only be obtained by apportioning equal squares of black marble and yellow facing bricks, with, perhaps, a few windows thrown in as make-weight, and that in any case the plan need bear no relation whatsoever to the elevation.

Mercifully, some of us still clung to tradition, and preferred to build on those foundations which had been laid with such care and skill by the old master-craftsmen; and it was to foster and encourage the study and practice of architecture on these, he believed, somewhat saner lines that the R.I.B.A. devoted a very large proportion of its activities.

Sir Cyril Kirkpatrick, President of the Institution of Civil Engineers, and Mr. R. L. Roberts, President of the Institute of Builders, also responded.

"The Guests" was proposed by Mr. Horace W. Langdon, vice-chairman of the Quantity Surveyors' Committee, and responded to by Sir Lynden Macassey, K.C., K.B.E.

MAIDSTONE ARTS AND CRAFTS SOCIETY

At a meeting of the Maidstone Arts and Crafts Society, held in the School of Art on Wednesday, December 2, Mr. W. E. Brooks, A.R.I.B.A., lectured on "The Function of Art in Every-Day Life." Mrs. Herbert Green presided.

Mr. Brooks outlined briefly the development of the arts and crafts from the Egyptian to the Renaissance eras and down to the present day. Art, he said, unlike science, never became a "back number," and what was held as beautiful at one time was still a joy for ever, even in these materialistic times, when a motor car was prized by most people more than an old

master. Formerly arts and crafts played a very important part in the everyday life of the people. Their pottery, their textiles and their household implements were made by craftsmen, and because they were made by hand and by men who took a pride in their work, they were beautiful and simple, and successful as a piece of craftsmanship. For art, like religion, was a striving after Truth.

With the advent of the industrial revolution, however, men lost that pride in craftsmanship, and art was displaced by utility. But there was a reaction to everything, and he believed that a new era was beginning when the arts and crafts would come into their own again. This was apparent in the wider interest taken by the man in the street in art in general, in old furniture and in architecture. The standard of commercial art was on the up-grade.

In the discussion that ensued the lecturer referred to the spoliation of our towns and countryside, and suggested that the Maidstone Arts and Crafts Society should form a civic committee to protect Maidstone from vandalism.

The vote of thanks was proposed and seconded by Mr. S. H. Loweth, F.R.I.B.A., and H. B. Green respectively.

FRENCH RENAISSANCE ARCHITECTURE

Sir Banister Fletcher, PP.R.I.B.A., F.S.A., in the last lecture of the Michaelmas term at the L.C.C. Central School of Arts and Crafts on Wednesday last, dealt with the later Renaissance and modern architecture in France, bringing the story of its evolution up to the present day.

With the aid of numerous lantern slides Sir Banister described some of the best-known churches of Paris: St. Etienne du Mont, with its fine arcaded aisles and gallery; the Church of the Monastery of the Val de Grâce, from which it was believed Wren drew inspiration in the designing of the interior of St. Paul's, London; and the famous Hôtel des Invalides, the "Chelsea Hospital" of France, with its mighty dome sheltering the tomb of Napoleon; the Panthéon, Soufflot's great work, with a dome resembling that of St. Paul's Cathedral, and yet so unlike it in detail, with a weak dome-colonnade unstrengthened by piers; and the Madeleine, in imitation of a pagan Roman temple.

Regarding the later palaces of the seventeenth and eighteenth centuries, Sir Banister described the Luxembourg Palace and the Palace of Versailles with its gardens, and the Petit Trianon, and concluded with a description of the modern architecture of France, which, he said, had largely remained faithful to the Classical styles.

SOUTH WALES INSTITUTES OF ARCHITECTS AND BUILDERS

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch) a lantern lecture on "The Development of Architecture in Concrete" was given by Major R. A. B. Smith, M.C., at the Engineers' Institute, Cardiff, on Thursday, December 3. Mr. J. Herbert Jones, F.R.I.B.A., presided.

The lecturer, who had recently returned from a visit to the United States of America, dealt with the completed buildings, and also the methods of construction and shuttering, and with various ways of obtaining finished surfaces in concrete in that country.

A vote of thanks was proposed by Mr. W. S. Purchon, A.R.I.B.A., and seconded by Mr. A. G. Thompson.

OBITUARY

F. A. WALTERS: 1848-1891

WE regret to record the death of Mr. Frederick Arthur Walters, F.S.A., F.R.I.B.A., in his eighty-third year.

Mr. Walters was responsible for the design of over forty Catholic churches, including the Abbey Church at Buckfast, the home of the monk-builders, which is to be consecrated in August of next year; the Sacred Heart, Wimbledon; the Guardian Angels, Mile End Road; SS. Anselm and Cecilia's, Kingsway; St. Anne's, Vauxhall; St. Mary's, Croydon; the Precious Blood, Worcester Street, S.E.; St. Anselm's, Dartford; and others at Anerley, Camberley, Deal, Eastbourne, East Grinstead, Godalming, Grayshott, Haslemere, Hull, Newington, Penarth, Sevenoaks, Sydenham, Cardiff, and South Wimbledon.

He also designed many collegiate and domestic works, among them being St. Mary's College at Woolhampton; Wonersh Seminary; portions of Downside Abbey; and orphanages and convents.

Besides being an architect, Mr. Walters was a noted antiquarian and master of heraldic art.

Major Harry Barnes, F.R.I.B.A., F.S.I., who has been elected Chairman of the Preparatory Committee appointed by the Home Secretary under the provisions of The Architects (Registration) Act.

TRADE NOTES

A catalogue illustrating and describing Saro doors and Plytex panelling has recently been issued by the Merchant Trading Co., Ltd., of 52 Bishopsgate, E.C.2. Saro all-flush laminated doors are manufactured by the Laminated Wood Products, Ltd., and marketed by the Merchant Trading Co., Ltd. The materials used for these doors are obtained from this country, the Dominions and the Colonies; the manufacture and labour is British. Saro doors, therefore, represent an all-British product, and are suitable for use in all types of buildings, such as hospitals, offices, cinemas, theatres, flats, etc. They are available in many finishes, as will be noted from the catalogue, which illustrates a comprehensive range.

Plytex panelling is a patented building material comprising artificial lumber or fibre board, combined with plywood or metal. By combining the lightness and insulating properties of fibre board or artificial lumber with the great strength of plywood, a material can be built up for all types of partitioning. The method of combining these materials is by pressing plywood, by means of waterproof cement, to both faces of one or more thicknesses of the fibre board. The thickness of the multiply face is varied according to the size of the panels and the degree of stiffness required. The Plytex panels, thus produced, are claimed to assure rigidity, prevent drumming, and, being unaffected by changes of temperature, to eliminate all warping, shrinking and splitting. For rigidity and strength, Plytex is said to be equal to solid wood of equal thickness, and is only about one-half of the weight of solid wood. Any sizes up to 4 ft. wide by 12 ft. long constitute normal standard production, but single panels can be supplied up to 8 ft. wide and any lengths. Plytex can be used for partitioning, ship partitioning and decoration, shop fitting, cabinets, telephone booths, etc.

*

Messrs. Johns-Manville Co., Ltd., of 46 Victoria Street, S.W.1, have recently issued a brochure illustrating and describing their system of acoustical treatment. In addition, a page has been devoted to a tabulation of the various types of acoustical materials with their sound-absorbing efficiencies.

For more than half a century Johns-Manville have taken a prominent part in supplying materials for building construction, for the conservation of power in industry and for fire protection generally. The primary products of Johns-Manville are asbestos and its derivatives, such as textiles, fibre, etc. The secondary products

are formed by combination with other elements and by the processing of other minerals.

From the four basic mineral materials—asbestos, magnesium carbonate, diatomaceous silica (celite) and rock wool from argillaceous limestone — Johns - Manville furnish insulation in the form of sectional pipe coverings; insulation sheets, blocks, bricks and blankets; insulating cements, fillers and finishes, insulating paper and felts; as well as light-weight aggregate used with Portland cement for making insulating concrete. Also various types of packings, steam traps, friction blocks and refractories.

For the field of building construction, the firm make the following materials: rigid asbestos slates, asphalt slate surfaced tiles, roll roofing, special roofings for special conditions, asbestos cement sheets, both flat and corrugated, for roofing, siding, sheathing and partitions; waterproofing and damp-proofing, celite for concrete, insulating and sound deadening felts and boards, flooring and acoustical service and materials, insulations for pipes, furnaces and heaters.

A copy of the brochure is obtainable, free of charge, on application to the firm at the above address.

*

Messrs. W. H. Gaze and Sons, Ltd., have recently secured the following contracts: Presbyterian Church Hall, Walton-on-Thames, for Percy G. Overall, L.R.I.B.A.; house at Esher, for Messrs. W. Curtis Green and Partners; block of offices, Kingston-on-Thames, for Stanley P. Anderson, F.R.I.B.A.; house at Worplesdon, for Messrs. Wood and Rose, AA.R.I.B.A.; and additions to the Keystone Knitting Mills, Elstree, for Messrs. Grace and Hughes.

*

The Stanton Ironworks Co., Ltd., near Nottingham, having acquired a financial interest in Wilson Brothers Pipe Fittings, Ltd., of Bridgeton Foundry, Glasgow, have entered into a working arrangement whereby the Glasgow works will be utilized by Stanton for assisting in dealing with Scottish orders; also for enabling the Stanton Company to carry a varied stock of their standard sand-cast and De Lavaud spun iron pipes, and specials, for Scottish requirements.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Fish Bar, No. 1 Barrett Street, Oxford Street, W.1. (pages 826–828). General contractors, Y. J. Lovell and Son. Sub-contractors: Crittall Manufacturing Co., Ltd., patent glazing and casements; Jos. Ebner and Sons, ebonite flooring; G. E. Wallis and Sons, Ltd., fireproof doors; Haywards, Ltd., iron staircases.

Gaumont Palace, Coventry (pages 830–831). General contractors: McLaughlin and Harvey, Ltd. Sub-contractors: John Lysaght, Ltd., constructional steelwork; Clark and Fenn, Ltd., fibrous plaster and decorations; J. Jeffreys & Co., Ltd., heating, ventilation and hot-water supply; Shaws Glazed Brick Co., Ltd., terra-cotta facings to elevations; Benham and Sons, Ltd., kitchen equipment; Garton and Thorne, Ltd., canopy, balustrade, door grilles and poster frames; Gardiner, Sons & Co., Ltd., metal windows, hand-power kitchen lift and entrance gates; Crittall Manufacturing Co., Ltd., lantern lights; The Kleine Company, Ltd., reinforced concrete floors; Marble Mosaic Co., Ltd., marble and terrazzo floors and staircases; George Spencer, Moulton & Co., Ltd., rubber flooring; W. W. Turner & Co., Ltd., seating and carpeting; John Mallin & Co., Ltd., fireproof curtain and drencher; Shapland and Petter, Ltd., entrance doors, etc.; Mather and Platt, Ltd., fireproof roller shutter to back of stage; A. E. Davies, ironmongery; John Compton Organ Co., Ltd., organ installation; Jensen & Co., organ console lift; Arthur Scull and Son, Ltd., fire hydrant installation.

Works Surgery for Messrs. Pilkington Bros., Ltd. (page 836). General contractor, T. Winstanley. Sub-contractors: Robert Walsh, heating and hot-water supplies; Henry Hargreaves and Sons, ventilation; Pilkington Bros., Ltd., electric wiring and lighting.

COMPETITIONS OPEN

December 31.—Sending-in day. Latest date for conditions was September 30. Proposed New Town Hall and Municipal Buildings, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions were obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost: £1,000 or less) for the Incorporated Association of Architects and Surveyors. Premiums: 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

THE ARCHITECTS' DIARY

WEDNESDAY, DECEMBER 30

R.I.B.A., 9 Conduit Street, W.1. Second of three Christmas holiday lectures for boys and girls. "Mediæval and Renaissance Houses." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

FRIDAY, JANUARY 1, 1932

R.I.B.A., 9 Conduit Street, W.1. Last of three Christmas holiday lectures for boys and girls. "Houses of the Moderns." By E. R. Jarrett, A.R.I.B.A. **3 30 p.m.**

SATURDAY, JANUARY 2

Sunrise, 8.6 a.m. Sunset, 4.2 p.m.

MONDAY, JANUARY 4

R.I.B.A., 9 Conduit Street, W.1. Award of prizes and studentships. Criticism by E. Berry Webber, A.R.I.B.A., on work submitted. **8 p.m.**

WEDNESDAY, JANUARY 6

L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. "German Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 7

Incorporated Institute of British Decorators, Painters' Hall, Little Trinity Lane, E.C.4. "The Future of Domestic Decoration." By C. O. Masters.

SATURDAY, JANUARY 9

Sunrise, 8.4 a.m. Sunset, 4.10 p.m.

MONDAY, JANUARY 11

Architectural Association, 34 Bedford Square, W.C.1. "The A.A. Excursion to Austria, 1931." By Grahame B. Tubbs, A.R.I.B.A. Also exhibition of photographs of buildings visited on the excursion. Until January 22. **8 p.m.**

WEDNESDAY, JANUARY 13

Manchester Society of Architecture. "Rational Architecture." By Joseph Emberton, F.R.I.B.A. **6.30 p.m.**

Liverpool Architectural Society, Bluecoat Chambers, School Lane, Liverpool. "Housing on the Continent." By L. H. Keay, F.R.I.B.A. **6 p.m.**

L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. "Belgian and Dutch Renaissance." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 14

Thanet School of Art Lectures on Architecture. At Chatham House School, Ramsgate. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, JANUARY 15

Hastings Municipal School of Art Lectures on Architecture. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, JANUARY 16

Sunrise, 8.0 a.m. Sunset, 4.20 p.m.

Incorporated Association of Architects and Surveyors. Visit (afternoon) to the Tower of London.

MONDAY, JANUARY 18

R.I.B.A., 9 Conduit Street, W.1. President's address to students and presentation of medals and prizes, 1931. **8 p.m.**

WEDNESDAY, JANUARY 20

L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. "Spanish Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 21

L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. "Fourteenth-Century Architecture." By Herbert Mansford. **7.30 p.m.**

West Yorkshire Society of Architects. At the College of Art, Leeds. "Competitions." By Percy E. Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

Thanet School of Art Lectures on Architecture. At Chatham House School, Ramsgate. "Awakening of Florence." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, JANUARY 22

Hastings School of Art Lectures on Architecture. "Awakening of Florence." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, JANUARY 23

Sunrise, 7.53 a.m. Sunset, 4.31 p.m.

MONDAY, JANUARY 25

Architectural Association, 34 Bedford Square, W.C.1. "A Layman's Evening." Speakers: Lionel Smith-Gordon, A. P. Herbert and E. V. Lucas. **8 p.m.**

TUESDAY, JANUARY 26

Incorporated Association of Architects and Surveyors, 1 Wilbraham Place, S.W.1. "Housing Acts, 1928–30." By Leslie Maddock. **7 p.m.**

WEDNESDAY, JANUARY 27

L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. "English Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

British Wood Preserving Association. At the Auctioneers' and Estate Agents' Institute, 20 Lincoln's Inn Fields, W.C.2. "Diseases of Timber." K. St. G. Cartwright. **6 p.m.**

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BERMONDSEY B.C. has approved plans for the erection, by the works department, of forty-two flats and six shops in the Odessa Street area, at an estimated cost of £26,000.

The BERMONDSEY B.C. is acquiring further property in connection with the Rotherhithe Street clearance scheme, at a cost of £12,000.

Plans passed by the BERMONDSEY B.C.: Reconstruction, "Little Crown" beer-house, Albion Street, Bermondsey, for Messrs. Mann, Crossman and Paulin, Ltd.; block of flats, Rotherhithe Street, for Mr. W. E. Baker.

Plans passed by the COULSDON U.D.C.: House, Caterham Drive, for Messrs. H. Turnbull & Co.; bungalow, Waddington Avenue, for Mr. T. C. Sales; alterations and additions, 6, 8, 10 Chipstead Valley Road, for Mr. E. R. Taylor; two houses, Hermitage Road, for Messrs. Kirk and Kirk, Ltd.; two houses, Woodstock Road, for Mr. V. H. Ayles; three lock-up shops, Godstone Road, for Messrs. O'Sullivan (Kenley), Ltd.; bungalow, Woodplace Lane, for Mr. P. W. Prevett.

Plans passed by the CATERHAM U.D.C.: Store, 16 Godstone Road, for Mr. W. O. Dunn; house, Salmons estate, for Messrs. Thomas and Sutcliffe; fourteen houses, Stafford Road, for Messrs. E. O'Sullivan (Kenley), Ltd.; three shops, Croydon Road, for Messrs. Allen and Sons.

The HACKNEY B.C. is to obtain land in Lower Clapton Road for a housing scheme.

Plans passed by the HACKNEY B.C.: Alterations and additions, 83 Upper Clapton Road, for Mr. F. T. Dear; alterations and additions, "Perseverance" beer-house, Boleyn Road, for Mr. S. A. Yeo; various buildings, Clapton Stadium, Millfields Road, for Messrs. Wallis, Gilbert and Partners.

The L.C.C. is to make a building grant to the Duchy of Cornwall, in connection with the proposed erection of seventy flats and twenty-three maisonnettes in Newburn Street, LAMBETH.

Plans passed by the LEWISHAM B.C.: Four houses, Princes Road, for Messrs. Wright and Renny; additions, Upland Hall, Forest Hill, for Mr. W. J. Kane; flats, Dartmouth Road, for Mr. J. T. R. Wildman; five houses, Defrene Road, for Mr. R. B. Rowell.

Plans passed by the MARYLEBONE B.C.: Buildings, Abbey Road and Grove End Road, for Western Heritable Trust, Ltd.; first portion of Selfridge's building extension, Somerset Street and Duke Street, for Mr. A. D. M. Miller.

Plans passed at PURLEY: House, Smitham Bottom Lane, for Mr. F. Sutton Smith; two houses, Brancaster Lane, for Messrs. H. Holliday, Williams and Partners; house, Manor Way, for Mr. A. Close; house, Hartley Down, for R. A. Bayley; two houses, Hadyn Avenue, for Old Lodge Estate, Ltd.

Plans passed by the ST. PANCRAS B.C.: Additions, 166 Great College Street; buildings, site of 182–194 Euston Square; eight houses, rear of Leighton Road; extensions, London Temperance Hospital, Hampstead Road.

Plans passed at SANDERSTEAD: Squash racquet court, Selsdon Park Hotel, for Mr. H. Macintosh; bungalow, Kingswood Way, for Mr. H. A. Dodd; four houses, Old Farleigh Road, for Messrs. C. Midmer and Sons.

The Coulsdon U.D.C. has purchased a site at SANDERSTEAD for the erection of a fire station.

Messrs. R. Costain and Sons, Ltd., are to erect 150 houses on the SANDERSTEAD section of the Croham Heights estate, Surrey.

The SHOREDITCH B.C. is to proceed with the erection of a sunlight clinic in Kingsland Road.

Plans passed by the SOUTHWARK B.C.: Shop, Walworth Road, for Messrs. Runham Brown Bros.; building, corner of Bankside and Southwark Bridge Road, for Mr. J. Emberton; building, 121–123 Newington Butts and Brune Place, for Messrs. W. E. Riley and E. B. Glanfield.

The L.C.C. is to arrange for the widening of the STRAND, between Duncannon Street and Trafalgar Square, at a cost of £52,000.

The Surrey Education Committee has approved plans for the erection of a junior school for 366 pupils in Ridge Road, SUTTON, at an estimated cost of £6,000.

The WOOLWICH B.C. is to proceed with the first section of the Middle Park housing scheme by direct labour. The total cost is estimated at £156,000.

SOUTHERN COUNTIES

The Oxford Education Committee has scheduled a site on the Quarry Fields estate, HEADINGTON, for the erection of an elementary school.

The Oxfordshire Education Committee is to erect a senior school for 160 pupils at KIDLINGTON.

The OXFORD Corporation is to proceed with a part of the St. Aldate's clearance scheme.

The OXFORD Corporation has obtained sanction to borrow £21,500 for extensions to the municipal buildings.

The OXFORD Corporation has passed preliminary plans, submitted by Mr. G. T. Gardner, for the erection of a cinema in Cowley Road.

The OXFORD Corporation proposes to adapt the London Road hospital as a city general hospital and acquire a site at Headington, for a new isolation hospital.

Plans passed by the OXFORD Corporation: Residence, Manor Road, for the Governors of Radcliffe Infirmary; alterations, 135 High Street, for Messrs. A. Baker & Co.; warehouse, 53 London Road, for Mr. R. Rowland; twenty-four houses, Fern Hill Road, for Messrs. Ives and Rushby; house, Jack Straws Lane, for Mr. R. F. Dodd; house and shop, Cinnaminta Road, for Mr. W. Giles; six houses, Fern Hill Road, for Artisan Building Co.; additions, 62 Holywell Street, for the Governors of Merton College; four houses, Iffley Road, for Mr. G. H. Simmons; additions, Conservative Club, New Road, for trustees; village hall, Godstow Road, Wolvercote, for Hall Committee; two houses, Stapleton Road, for Messrs. Pye Bros.

The Oxfordshire Education Committee is to erect a central school at WHEATLEY.

SOUTH-WESTERN COUNTIES

The DORCHESTER Corporation is to erect twenty houses in Marie Road.

The DORCHESTER Corporation has acquired seven acres of land on the Duchy of Cornwall estate for a housing scheme.

Plans passed by the DORCHESTER Corporation: Twenty-one houses, Coburg Road, for Mr. L. A. Short; store and garage, Maimbury Road, for Messrs. James Foot, Ltd.; alterations, 13 Cornhill, for Messrs. Boots (Western), Ltd.; alterations, 24 High Street West, for the Britannic Assurance Co., Ltd.; house, Monmouth Road, for Mr. G. Bugler.

The PLYMOUTH Corporation is to develop land in St. Aubyn Street for the erection of houses and a maternity centre.

Plans passed by the PLYMOUTH Corporation: Eight houses, Cresthill estate, for Mr. F. Westcott; eight houses, Cresthill estate, for Mr. J. Binmore; twelve houses, Cresthill estate, for Mr. W. Andrews; seven houses, off Kent Road, for Mr. W. G. Perkins; fourteen houses, Lydford Park Road, for Mr. Hender; seventeen houses, Browning Road, for Messrs. A. C. Jones and Son; extensions to grandstand, Home Park, for Plymouth Argyle Football Club, Ltd.

EASTERN COUNTIES

The IPSWICH Education Committee is to erect a junior mixed school for 400 children on the Gainsborough estate, at an estimated cost of £8,000.

Mr. G. H. Smith is to erect a mission hall on the Gainsborough estate, IPSWICH.

Plans passed by the LOWESTOFT Corporation: Shop and house, London Road, for Mrs. Perredes; six houses and shop, Kimberley Road, for Mr. J. Gaze; two cottages, Winnipeg Road, for Mr. H. Parker; six bungalows, Rock Estate, Oulton Road, for Mr. A. E. Ingles; two bungalows, Long Road, for Mr. D. Dowell.

Plans passed by the YARMOUTH Corporation: House, Caister Road, for Messrs. H. A. Holmes and Sons; four houses, Beatty Road, for Mr. C. Mumford; alterations to premises, Regent Street, for Mr. P. J. Nichols; two houses, Hawkins Avenue, for Messrs. H. R. Middleton & Co., Ltd.; two houses, Caister Road, for Messrs. H. Bedwell and Son; house, Middleton Road, for Mr. H. D. Nudd; garage extension, Market Road, for Harbord's Motor Garage, Ltd.

MIDLAND COUNTIES

Plans passed by the BEDFORD Corporation: Extensions, junior preparatory school, St. Peter's Street, for Mr. O. P. Milne; extensions, Utility Service Laundry, Willow Road, for Mr. J. C. Burley.

The BEDFORD Corporation has obtained sanction to proceed with the erection of 232 houses on the London Road estate.

The GLOSSOP Corporation has passed plans, submitted by Mr. W. Carnall, for the erection of a sub-post office in Whitfield.

Plans passed by the KIDDERMINSTER Corporation: Two houses, Vine Street, for Mrs. A. A. Spilsbury; two houses, Spencer Street, for Messrs. S. C. Wallace & Co.; house, Neville Avenue, for Mr. H. Adams; house, Sutton Park Road, for Mrs. T. Barker; five houses, Talbot Street, for Mr. G. Williams.

The OLDBURY Corporation has had prepared a lay-out for the erection of another seventy-two houses on the Newbury Lane estate. It is proposed to undertake the scheme, by direct labour, at an estimated cost of £27,100.

The OLDBURY Corporation has obtained sanction from the Ministry of Health for a loan of £25,770 for the erection, by direct labour, of sixty-eight houses on the Newbury Lane estate.

The OLDBURY Education Committee is to erect a junior school for 400 pupils at Bleakhouse, at an estimated cost of £19,250.

The OLDBURY Education Committee is obtaining sites for two new elementary schools.

The OLDBURY Corporation is preparing a detailed scheme for slum clearances on the New Meeting Street and Albert Street areas.

The OLDBURY Corporation has prepared a scheme for the erection of a welfare centre at Warley.

Plans passed by the OLDBURY Corporation: Extensions, bone manure works, Causeway Green Road, for Messrs. Price and Patrick; two houses, Sunny Bank Road, for Mr. C. L. Smith; house, Richmond Hill, for Mr. L. G. Lane; 111 houses, Chestnut estate, Quinton, for Mr. A. Robinson; two houses, Hadley Street, for Messrs. W. Jackson, Ltd.; fifty-six houses, Hill Top estate, for the Smethwick Corporation.

NORTHERN COUNTIES

The ACCRINGTON Education Committee is to erect a nursery school at Rough Lee.

The CARLISLE Corporation is to obtain sites for the erection of another 166 houses.

The MIDDLESBROUGH Corporation is to adapt Marton House and seventy-seven acres of land as a sanatorium.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 3
¾" Crushed Ballast . . . . . ,,	9 6
Building Sand . . . . . ,,	10 0
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality :	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . . ,,	30 0 0
Double Headers . . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . . ,,	2 0
3" ,, ,, ,, . . . ,,	2 3
4" ,, ,, ,, . . . ,,	3 0

MASON

The following d/d F.O.R at Nine Elms :	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station :

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station :	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
Rough boarding, ¾" . . . ,,	1 6 0
,, 1" . . . ,,	18 0
,, 1¼" . . . ,,	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness .	¼"	½"	¾"	1"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch . .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder . .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings :
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . ,,	10 0
,, ,, ¾" . . ,,	9 9
,, ,, ½" . . ,,	9 6
,, ,, ⅝" . . ,,	9 0
,, ,, ¾" . . ,,	9 0
,, ,, 1" . . ,,	9 0
,, ,, 1¼" . . ,,	9 0
,, ,, 1½" . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes :	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 ft. . ,,	7½ to	1 0
,, ,, 2 . . ,,	10 ,,	1 3½
,, ,, 3 . . ,,	1 4½ ,,	1 10
,, ,, 4 . . ,,	1 11 ,,	2 4
,, ,, 6 . . ,,	2 3 ,,	2 7½
,, ,, 8 . . ,,	2 5 ,,	3 0½
,, ,, 12 . . ,,	2 10 ,,	3 3½
,, ,, 20 . . ,,	3 3½ ,,	3 9
,, ,, 45 . . ,,	3 6½ ,,	4 0½
,, ,, 65 . . ,,	3 11½ ,,	4 4
,, ,, 90 . . ,,	4 4 ,,	4 9
,, ,, 100 . . ,,	4 6 ,,	4 11
Vita glass, sheet, n/e 1 . . ,,		1 0
,, ,, ,, 2 . . ,,		1 3
,, ,, ,, over 2 . . ,,		1 9
,, ,, plate, n/e 1 ft. . ,,		1 6
,, ,, ,, 2 . . ,,		3 0
,, ,, ,, 5 . . ,,		4 0
,, ,, ,, 7 . . ,,		5 0
,, ,, ,, 15 . . ,,		6 0
,, ,, ,, over 15 . . ,,		7 6
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	2 4
Boiled oil . . . . ,,	2 8
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . . Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . ,,	1 18 6
,, ,, ,, underpinning . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . Y.S.	9

DRAINLAYER

	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do., all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
¼″ deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1¼″ ,, ,, ,, ,, ... ,,	2 7 6
4″ × 2″ fir battening for Countess slating. . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼″ do. . . . . ,,	3 4 0
1½″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1½″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1¼″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ,, ,, ,,	2 6
1¼″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ½″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ,, ,, ,,	4 6
Extra only for moulded horns . . . . . Each	9
1¼″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ,, ,,	3 0
1¼″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ,, ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R	1 6
4½″ × 3½″ ,, ,, ,, ,,	2 0
1¼″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . . ,,	3 0
1¼″ deal moulded wall strings . . . . . ,,	2 6
1¼″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . . ,,	1 2 0
Mild steel bar reinforcement, ¼″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 18 0
Do. in flashings . . . . . ,,	2 0 6
Do. in covering to turrets, etc. . . . . ,,	2 7 6
Do. in soakers . . . . . ,,	1 13 6
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

	½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks . . F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks . .	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks . ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 6
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement . ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ,, ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, ,, ,,	1 7 0
Extra, only for small quadrant angle ,, ,, ,,	F.R. 9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 1
Glazing only, British polished plate. . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

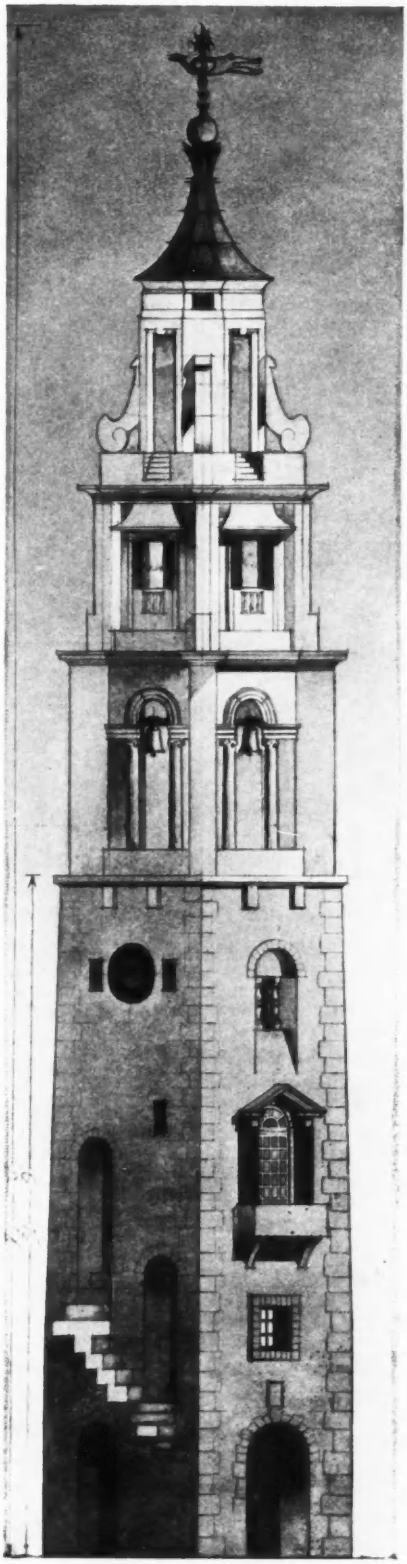
PAINTER

	s d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 6
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 0
Hanging ordinary paper . . . . . from ,,	2 9

FINE ARTS DEPT.

CAMPANILE : PORTMEIRION

CLOUGH WILLIAMS-ELLIS : : ARCHITECT



A PERSPECTIVE DRAWING OF THE BELFRY

THE belfry tower that dominates the citadel at Portmeirion, Merionethshire, has been described by at least one archæologically-minded visitor as "being obviously of two periods, a Baroque superstructure raised on an earlier, but mutilated, Saxon stump." Its actual origin is more truly given by a tablet within the tower itself:

"This Tower embodies sundry scattered remnants of the Castle of Gryffydd ap Cynau, King of North Wales, that stood on an eminence 150 yards north-west of this spot.

"It was finally razed to the ground *circa* 1869 by the then tenant of the property, Sir William Fothergill Cook, inventor of the Electric Telegraph, lest, so it is said, the ruins should become known and thus attract visitors to the place. This Tower is piously erected to the remote memory of his obscurely royal ancestor, the first builder on this peninsula, after an interval of some eight centuries, by Clough Williams-Ellis of Brondanw, architect and publican, the fear of attracting visitors being no longer operative."

The tower carries a clock and chime of bells hung in the Venetian archways of the fourth story. Above this are two outlook stages, and below it the clock room, another belvedere, a small bedroom and a loggia—seven stories in all. The total height from the rock foundation to the top of the gilded weather-vane is approximately 80 ft.

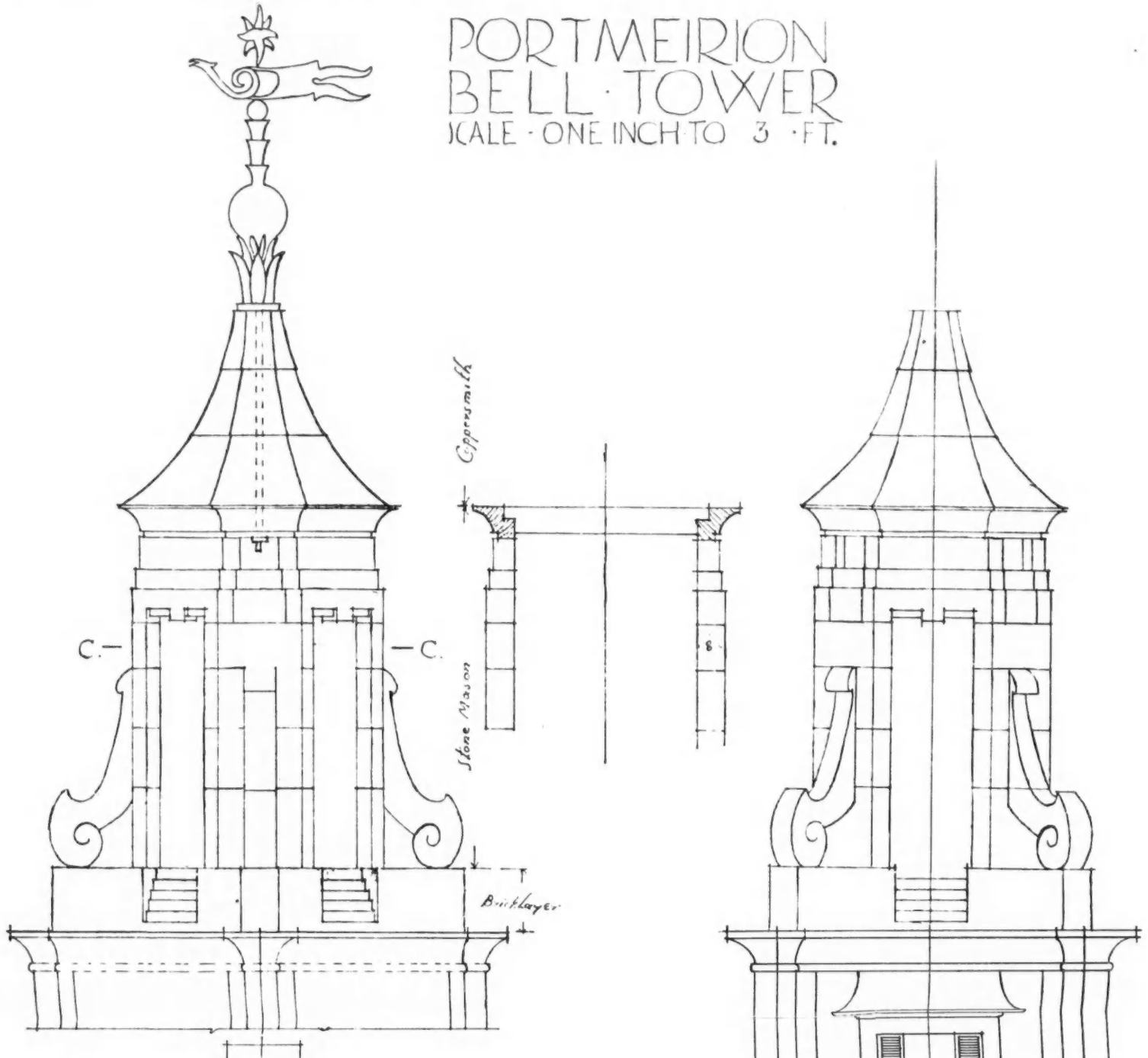
The butt of the tower is mostly of local granite, and the upper works are of brickwork, roughly rendered, the lantern of artificial stone and its roof of copper. All the floors are of concrete. The colour ranges from a warm greyish-brown at the base, through pale apricot, to a light cream at the cupola, in which are concealed occulting coloured lights.

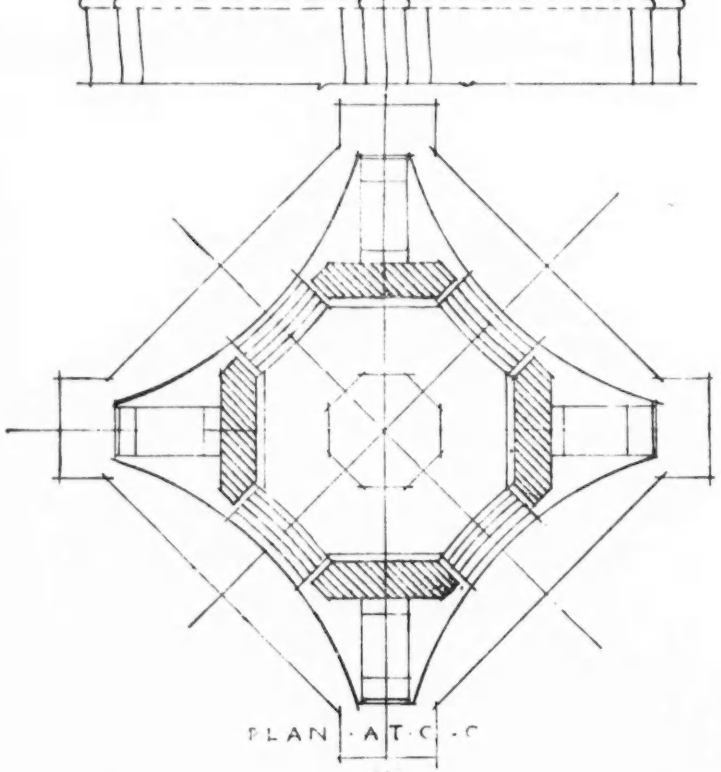
The whole structure, and the cliff on which it stands, that rises sheer from the sea, is flood-lit at night from the terrace of the hotel below, the whole illuminated picture being reflected in the little harbour.

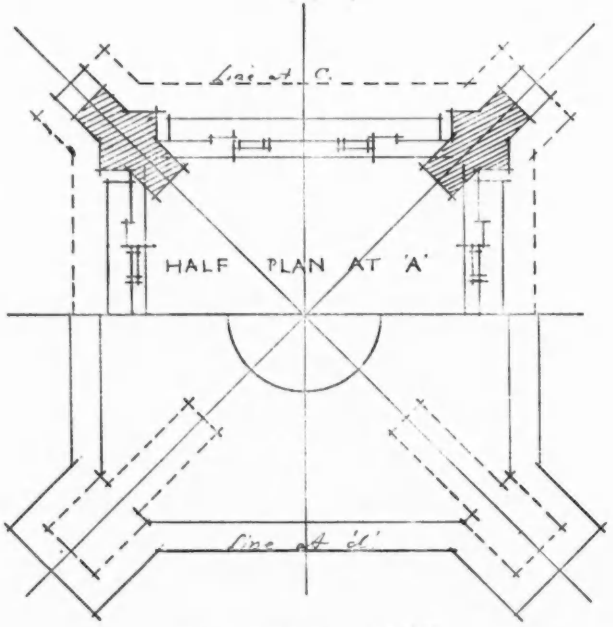
The drawings on the centre pages give working details of the structure; those on the last page show some of its features to a larger scale.

PORTMEIRION BELL TOWER

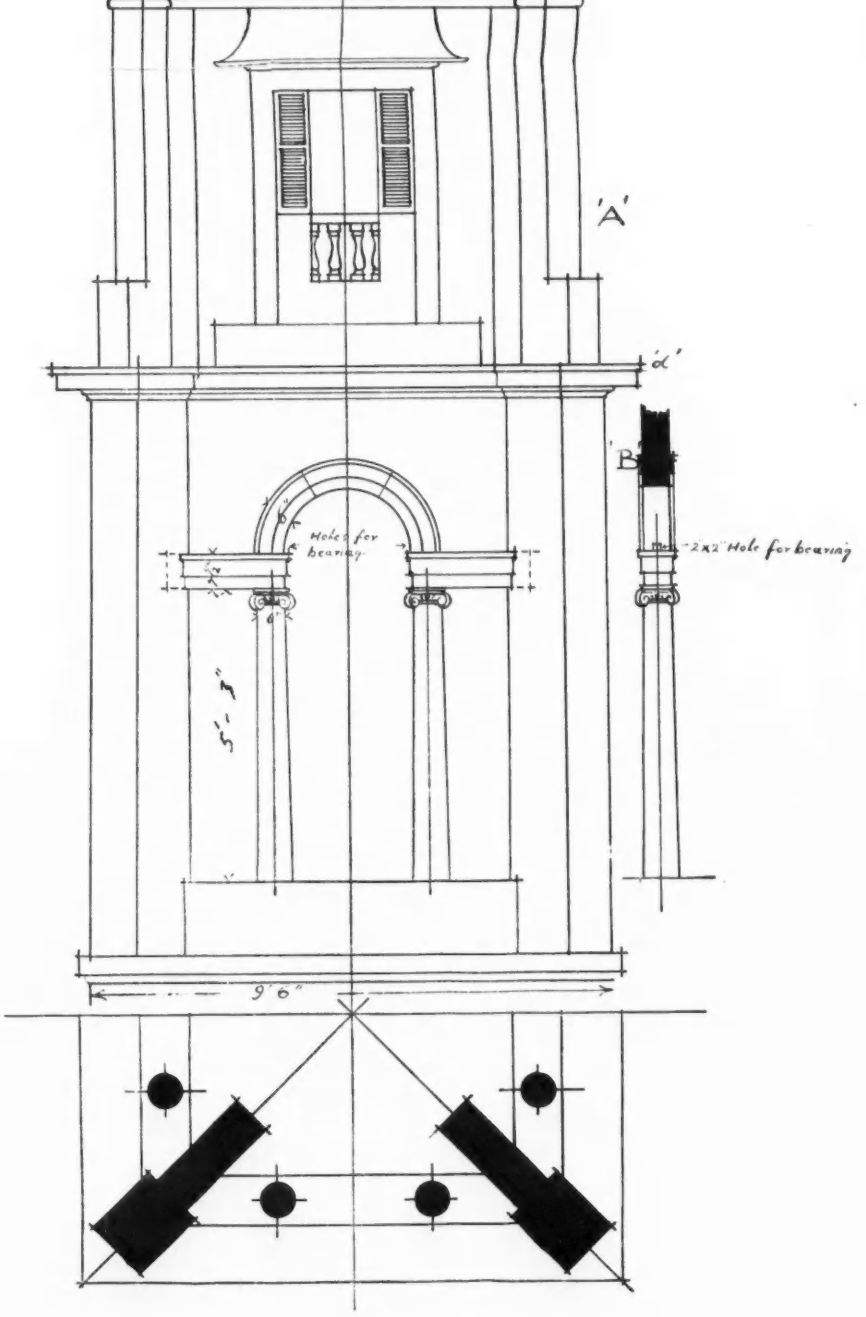
SCALE · ONE INCH TO 3 · FT.



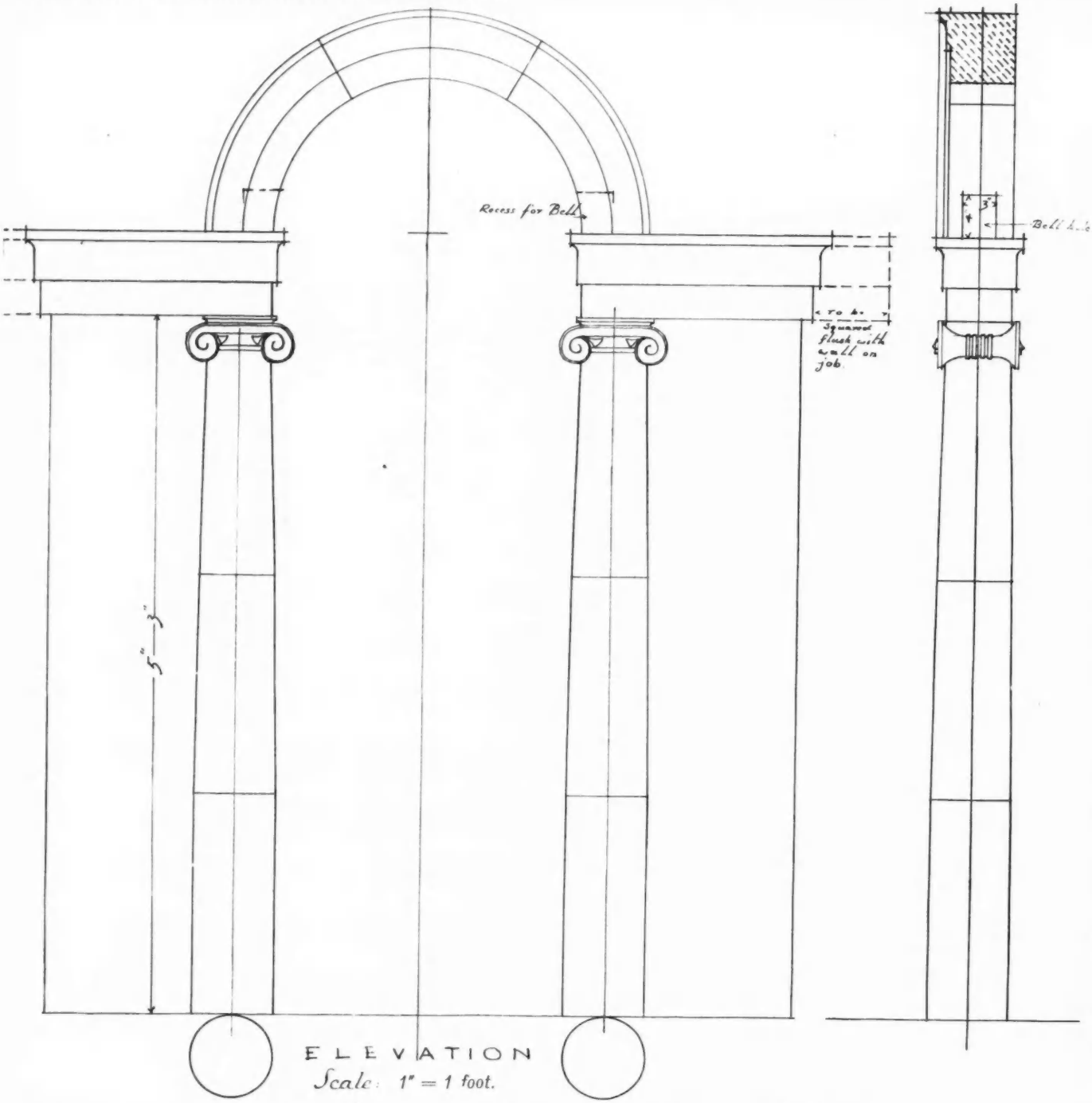




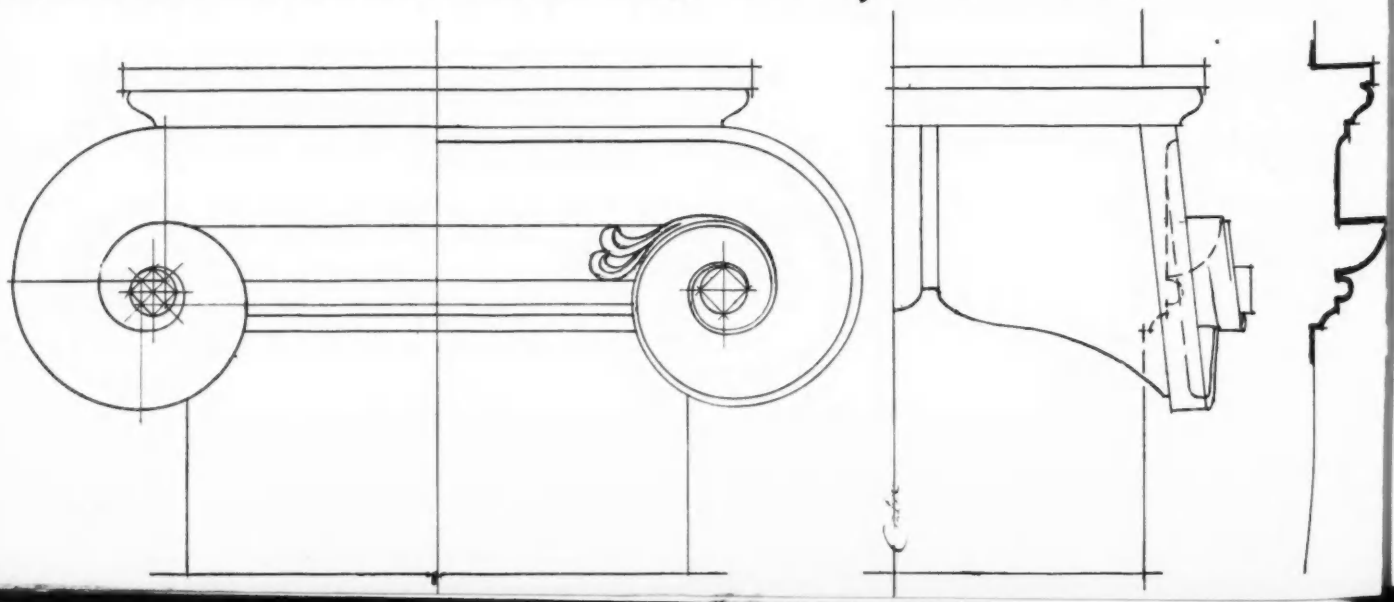
HALF PLAN AT 'B'



[*Clough Williams-Ellis, Architect.*

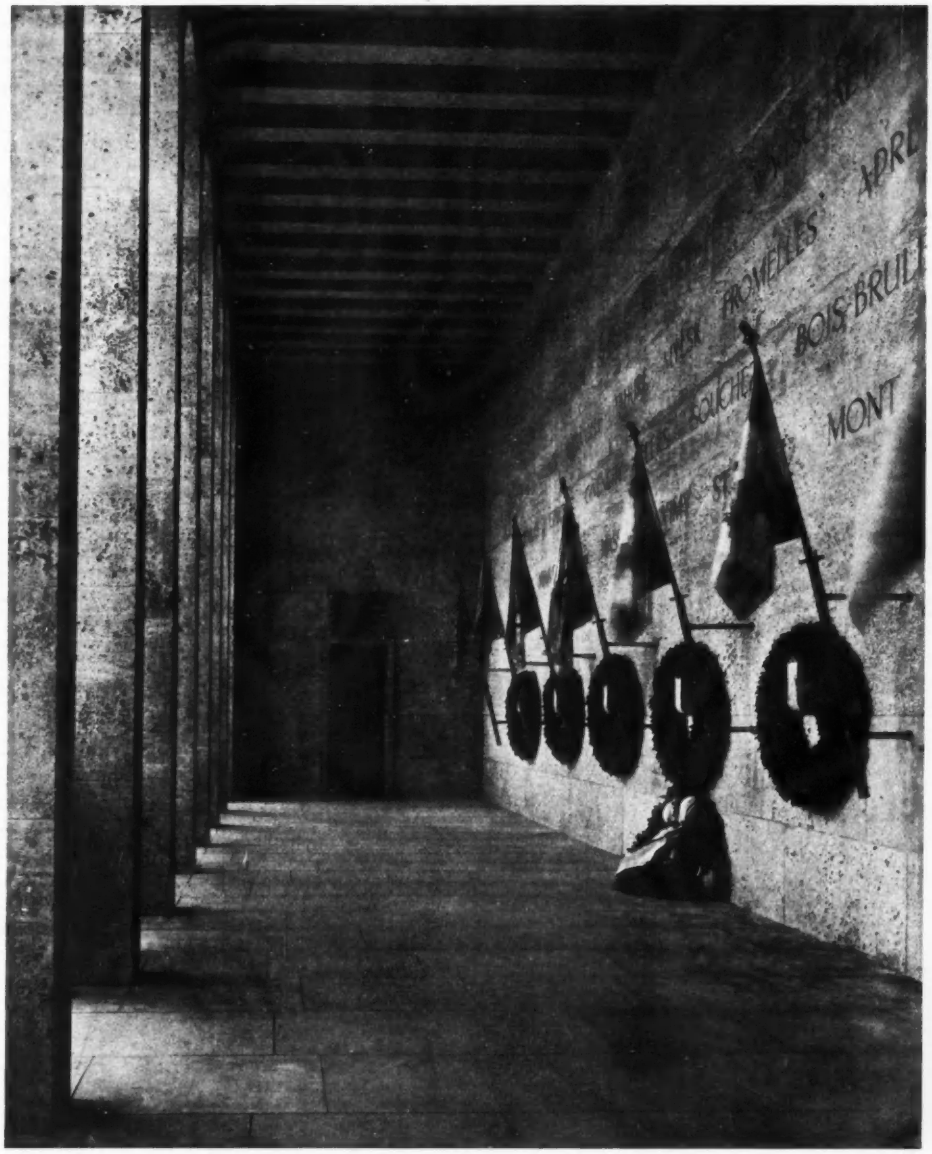


Portmeirion - Bell Tower: ½ Full size Ionic Caps to Columns -



NUREMBERG WAR MEMORIAL

FRITZ MAYER : 2. SOME DETAILS : ARCHITECT

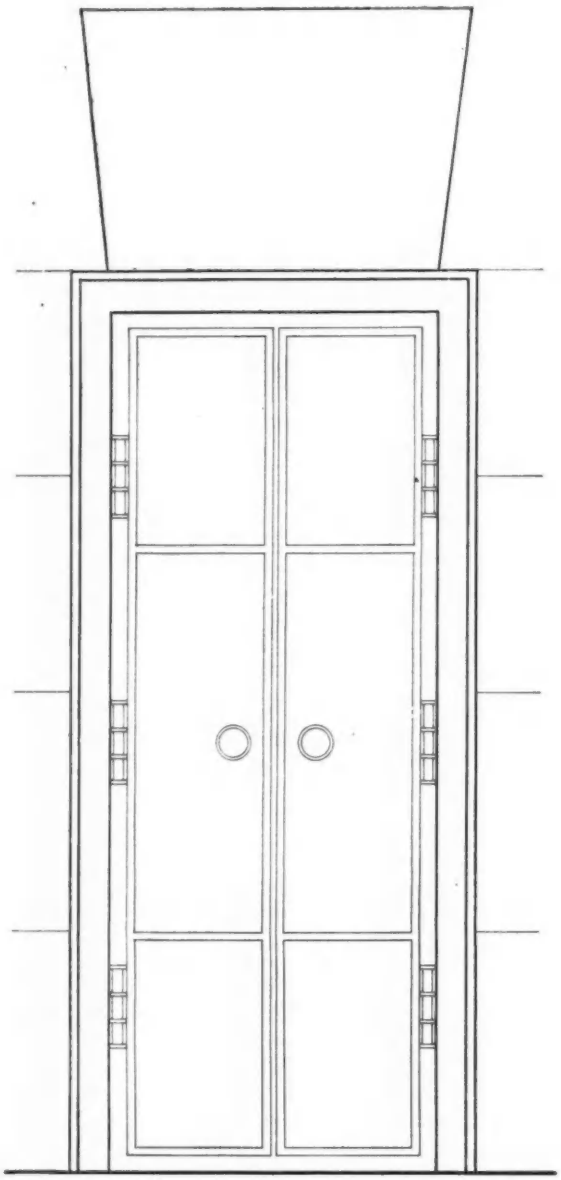


BANNERS IN THE PORCH OF HONOUR

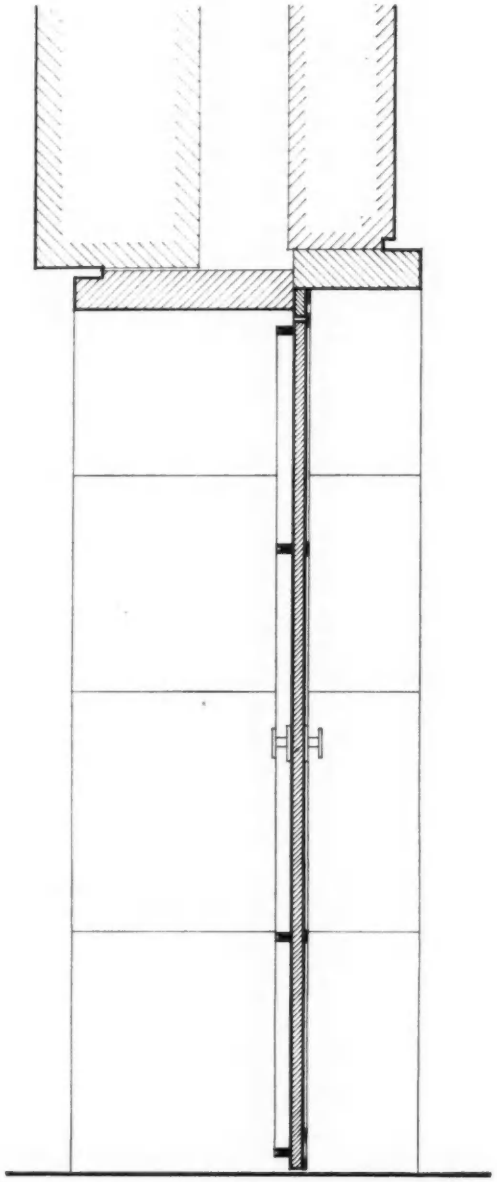
THE porch of honour is constructed in reinforced concrete and faced with slabs of French limestone. The doors are of bronze, and so are the banner- and torch-holders. In the ceiling the reinforced concrete structure is left visible. The modern conception of the whole is blended with a fine feeling for form, directly in the great tradition that is still alive, particularly in South Germany.

There are several graphic representations of figure subjects cut on the walls of the hall of remembrance by the Nuremberg painter and sculptor, Jobst Kuch. These represent a new departure in technique, of which the effect may be judged from the winged figure above the inscription reproduced on the last page. The light portions are sunk a little below the surface of the slabs of facing stone, and are roughened.

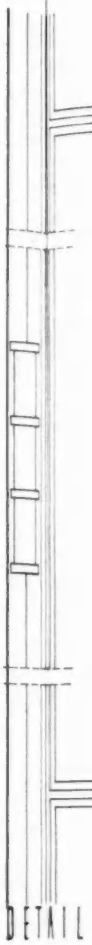
The previous supplement on this subject appeared with the issue for December 9.



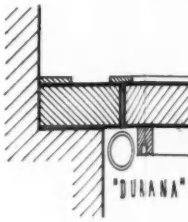
ELEVATION OF THE
PORCH OF HONOUR

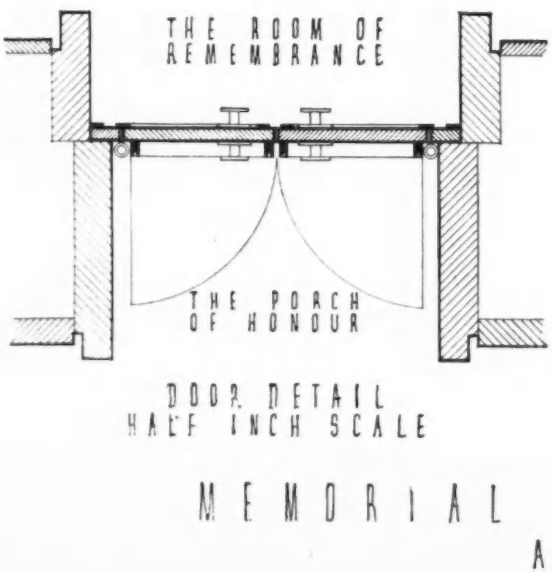


SECTION

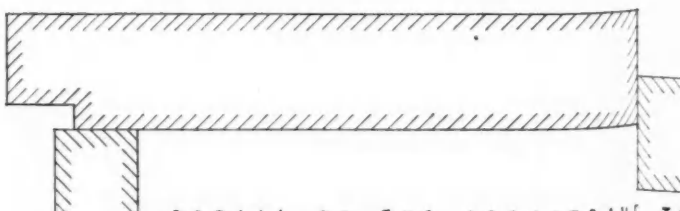


DETAIL





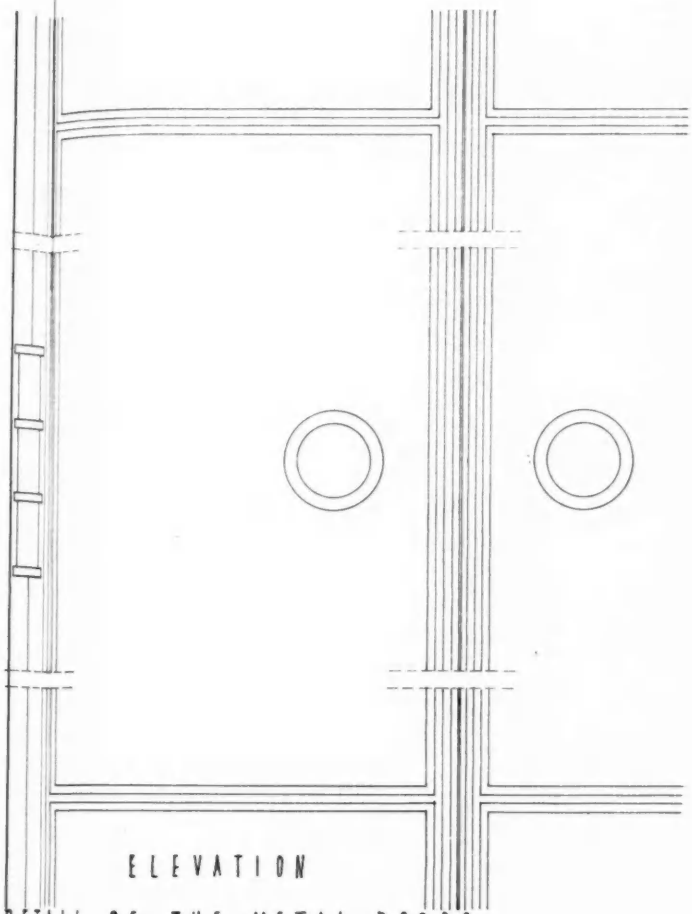
DOOR DETAIL
HALF INCH SCALE



DETAIL OF THE ARCHITRAVE T
IN POLISHED FRENCH LIMES
SCALE 1½ IN. TO ONE FOO

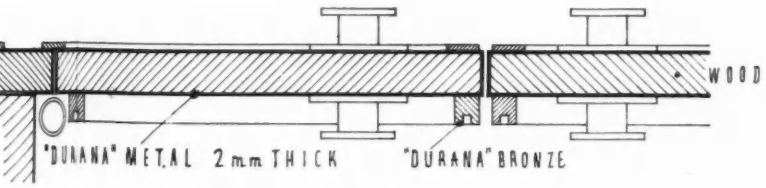
MEMORIAL TO THE FALLEN OF THE

ARCHITECT FRITZ MAYER

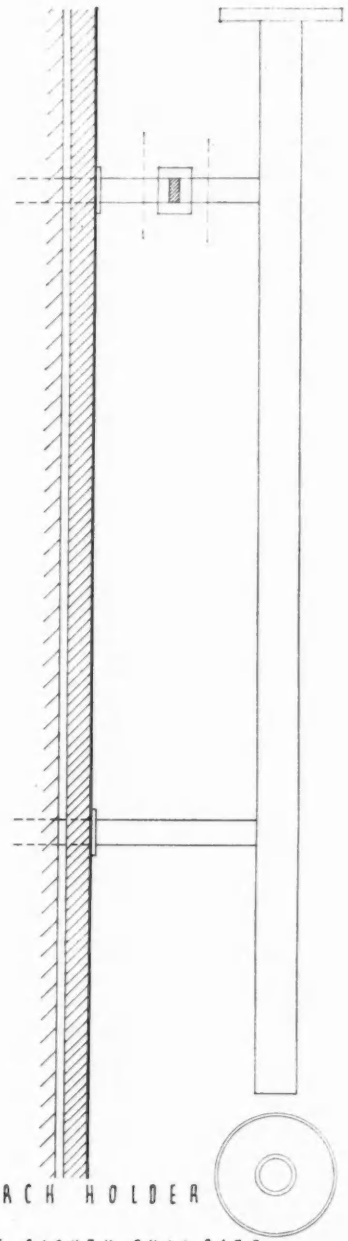


ELEVATION

DETAIL OF THE METAL DOORS

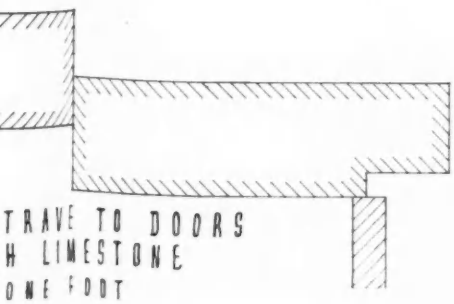


PLAN

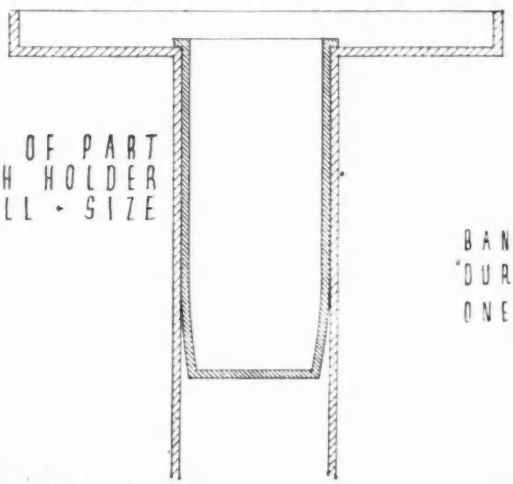


TORCH HOLDER

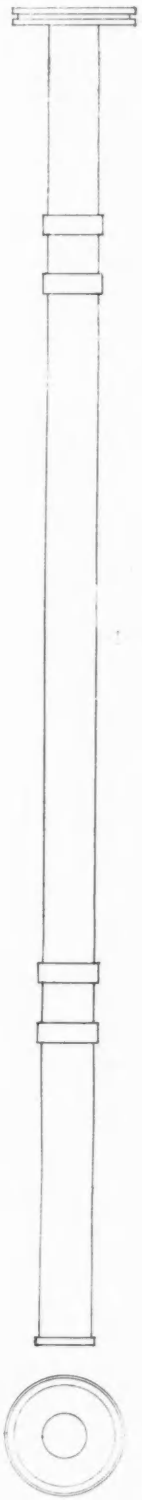
ONE EIGHTH FULL SIZE



TRAVE TO DOORS
H LIMESTONE
ONE FOOT



DETAILS OF PART
OF TORCH HOLDER
HALF FULL - SIZE



BANNER HOLDER
"DURANA" BRONZE
ONE EIGHTH F.S

THE TOWN OF NUREMBERG

YER NUREMBERG

ONE OF THE DOORS IN THE PORCH

THE DEDICATORY INSCRIPTION

SELECTED PRECEDENTS:

FOUR DOORS OF THE XVITH AND XVIITH CENTURIES

THE doorway at Romden Farm, Smarden (figure 1) has been moved from another position in the same building—a hall house, converted into stables and oast house—but preserves its character. The frame, like others of its period, has the lintel tenoned into the jambs, and it will be noticed that the joints where the mouldings of head and jambs intersect are alternately horizontal and mitres of 45°, changing at each moulding. The spandrels are furnished with a rose and pomegranate, the latter the badge of Catharine of Aragon, which places the date as before the marriage of Henry VIII with Anne Boleyn in 1533. The door is of unmoulded oak boards, nailed to ledges.

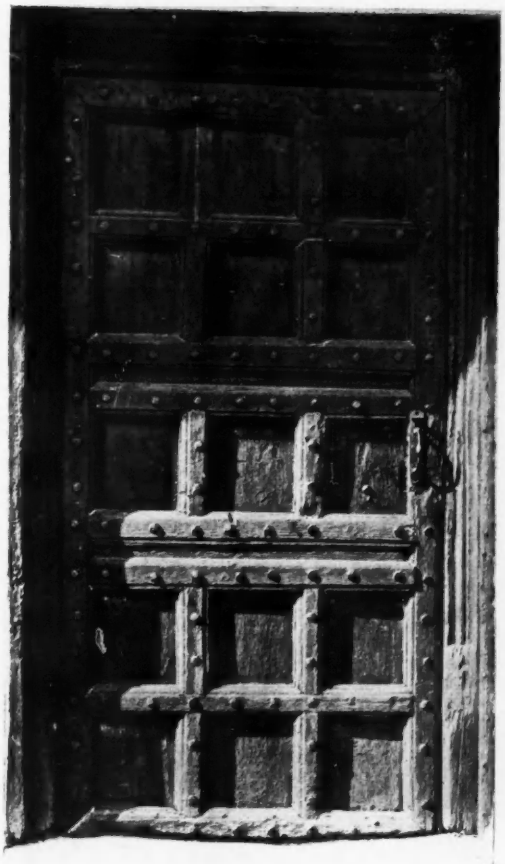
The frame of the street door at Elham (figure 2) is of similar design to that at Smarden but of less massive timbers, and the mouldings are stopped—the stops much worn—in the Elizabethan manner. The door itself is divided into three groups of square panels—six, three and six. The rails dividing the groups are channelled. The mouldings on rails, frames and muntins are run in lengths, cut off and mitred. A missing muntin shows the method clearly. The whole are put together and fixed to the backing with large hexagonal studs. Such doors were made in the late-sixteenth- and early-seventeenth-centuries.

Figure 3 shows a door at Great Wigsell, Bodiam, dated 1641, of the Jacobean type which is divided into small panels, in the centre of each of which is a raised lozenge or rectangle. The frame, rails and muntins are channelled and moulded on their edges. The knocker is of spur pattern. It and the pear-shaped ring are contemporary. The heads of such doors often bore armorial carving, for which a shield is here provided, but on it no charge has ever been carved.

The folding doors, with wicket, at Ightham Moat, Kent (in an earlier doorway), figure 4, are of mid-seventeenth-century date. The moulded framing is heavy and deep, the panels are ribbed and stopped, some with perfect linen pattern, others less definitely. The whole are fixed to the backing with iron studs as clearly shown in the photograph.

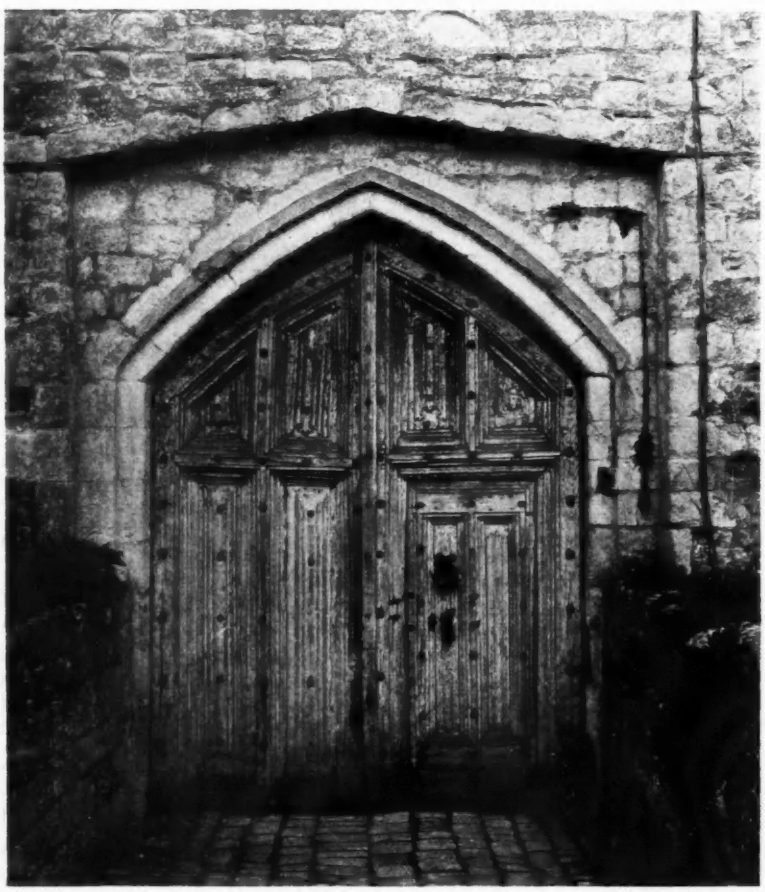
NATHANIEL LLOYD

1. *AT ROMDEN FARM, SMARDEN, KENT*

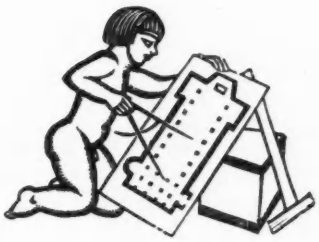


2. *IN ELHAM VILLAGE, KENT*

3. *AT GREAT WIGSELL, BODIAM, SUSSEX*



4. *AT IGHTHAM MOAT, KENT*



WEDNESDAY, DECEMBER 30, 1931

THE R.I.B.A. TO THE RESCUE

UNEMPLOYMENT among architects has reached alarming proportions. The effects of world depression have been evident for some time in a heavy diminution in the volume of general practice, but this, mercifully, was to some extent countered by the extensive programmes of social reconstruction carried out by municipalities, who kept large staffs in continuous employment. Government economy strictures, delivered in moments of panic, and not since countermanded with sufficient force, have knocked away this remaining prop, and now there can be no disguising the extent of the misfortune to which so many members of the profession are, and will continue to be, exposed.

In times such as this, when the structure of our social system seems to tremble and its economy no longer gives shelter to its most useful and devoted members, it becomes a duty of architects to help themselves within their own straitened economy by spreading whatever benefits fall to them over as large a proportion as possible.

Nothing could fit their case better than the plan proposed by the President of the R.I.B.A., which appears in this issue of THE ARCHITECTS' JOURNAL. It is quite obvious that any plan designed to relieve the pressure of unemployment calls for contributions of money from those who can best afford to contribute; but, as has been realized for long, the deprivations suffered through unemployment cannot be properly made good by anything short of active and congenial work, and this the scheme provides for in the institution of civic survey groups, similar to those which performed a valuable service to the profession and to society at large during the lean days of the war.

Since those days town planning has gone a long way and has discovered the enormous extent of territory to be covered by such a measure as the Town and Country Planning Bill. The problems of urban town re-development are innumerable and pressing, far too large to be adequately investigated by the staffs of local authorities, even if these were constituted with that end in view. Here lies a field of activity for which any State should find fitting reward. Properly directed and financed it will be of incalculable value.

There can be no doubts as to the usefulness of the work proposed, but we would like to think that the appeal to the profession for funds will be answered not only generously but to the full capacity of the profession to pay for its own salvation.

Dr. Unwin's appeal is worded in such a manner as expresses the situation in the clearest and most vivid light, but in this matter, as in any other that carries a general appeal, success follows closely where machinery is provided to prompt and direct the giver. We would like to see the appeal put forward as a simple question of will you or will you not help to carry the thing through, to be followed by some form to carry the amounts of weekly contribution.

The scheme must not be left in the air, and it must not be left to a small section of the profession to carry through in no way commensurate with its real seriousness to all.

A great deal remains to be organized before the financial results of Dr. Unwin's appeal can be turned into constructive activity. It is not thought that civic survey work can be found for all those that are without work, but although the scheme has its base in London, there is nothing to prevent its extension to other and provincial centres—to such places as Manchester and Birmingham, where civic problems are acute, and where there are organizations, similar to the London Society, which may unite with the R.I.B.A. and Town Planning Institute and with the local councils to make the survey of the greatest possible value.

Similarly, it may be supposed that any other measures which may be evolved to deal with the situation and are put forward to the proper quarters will be considered in their bearing upon the central problem.

The main fact to be realized at this moment is that through no fault of their own a large section of the profession is without the promise of any sort of employment, and that through the nature of world depression they are unlikely to find alleviation for many months to come.

We think also it is a mistaken policy that Government economies should add to the burdens of architects by foregoing the programmes of necessary reconstruction which would have kept many working, and we lose no opportunity of seconding Dr. Unwin's appeal for reconsideration of this disastrous policy.

John M. Howells and

Raymond M. Hood, Architects

THE NEWS BUILDING, NEW YORK

Some outstanding features are described by Astragal on the facing page

NEWS & TOPICS

ONE BUILDING AUTHORITY NEEDED

IT has been suggested that the reform of building legislation in London should include the transference of district surveyors from the L.C.C. to the borough councils. A comparison of procedure in the provinces and in London shows that where in Liverpool, say, an architect deposits plans to one authority, here he must go to two or three authorities often miles apart. Among these the district surveyor figures as a sort of half-way authority who, without giving definite indication of future conduct, may examine work as it proceeds and give directions, which may very well prove expensive. The rival powers of L.C.C. and district surveyor very often give rise to confusion, and invariably cause delay.

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It might be argued that the district surveyor is a very necessary instrument of the Building Act, a watch-dog upon the spot : but for the building owner or his architect, who are men to be considered, it is galling to have to go to the L.C.C. for one thing, to the district surveyor for another, to the engineer of the local borough council for yet another, and so on. Centralization would be, in this case, simplification.

THE NEWS BUILDING, NEW YORK

Of this thirty-six-story office skyscraper the architects are credited with saying that the exterior "created itself." Each window is 4 ft. high and 4 ft. wide, occupying 9 ft. overall : hence the elevation. $150,000 was allocated to decoration. The whole of this they spent upon the entrance to the building, of which the newspaper occupies a nine-story wing, for, otherwise, as they say, it would only have run to a thin layer of decoration over the fronts. The vertical members of these they have faced with white bricks, the horizontal with red, aiming thereby at a highly novel patterning of stripes that should distinguish this skyscraper from its fellows. The entrance hall runs through three stories and is entirely lined with black glass. In the centre there revolves, in a circular opening in the floor, lit from below, a globe of the world, having a diameter of nearly ten feet, intended to excite the curiosity of the passer-by.

THE NEW R.I.B.A. FORM OF CONTRACT

It is to be hoped that the changes in the R.I.B.A. form of contract which Mr. Michael Hoare has been elucidating for us elsewhere in this JOURNAL will achieve, as they are intended to achieve, efficiency and the avoidance of dispute. The simplification of the position of the architect and the definition of his functions as those of an agent of the employer should go far to secure the technical efficiency of the work of construction for the minimum expenditure, both of time and money. The majority of disputes between employers and contractors arises from complaints by contractors that they have been insufficiently remunerated, so that the introduction of provisions enabling the amount of a contractor's remuneration to be more easily adjusted without recourse to arbitration, or rendering more remote the chance of such adjustment being necessary, is most welcome.

THOMAS HARDY'S S.P.A.B. REPORTS

Reports on old buildings prepared by Thomas Hardy, when he was a young architect for the Society for the Protection of Ancient Buildings, have just been sold by the society for £1,000. What a metamorphosis ! Hardy, the young man full of dreams, descending the worn stairs of some ancient village tower to go to his cottage lodging where these reports would be written—with what else beside ! How much these reports have become both the first and the last of that long life—that church tower, perhaps, the substance of the intense, nearly melodramatic story called *Two in a Tower* !

★

There is something in this posthumous reward for his youthful labour that makes one feel small and perishable. The thought of his long life and all its bitter mental experience passing away and being no more than a long day in the life of those ancient churches for whose preservation he was the nearly unwilling instrument, is itself such a thought as troubled the young Hardy.

ASTRAGAL

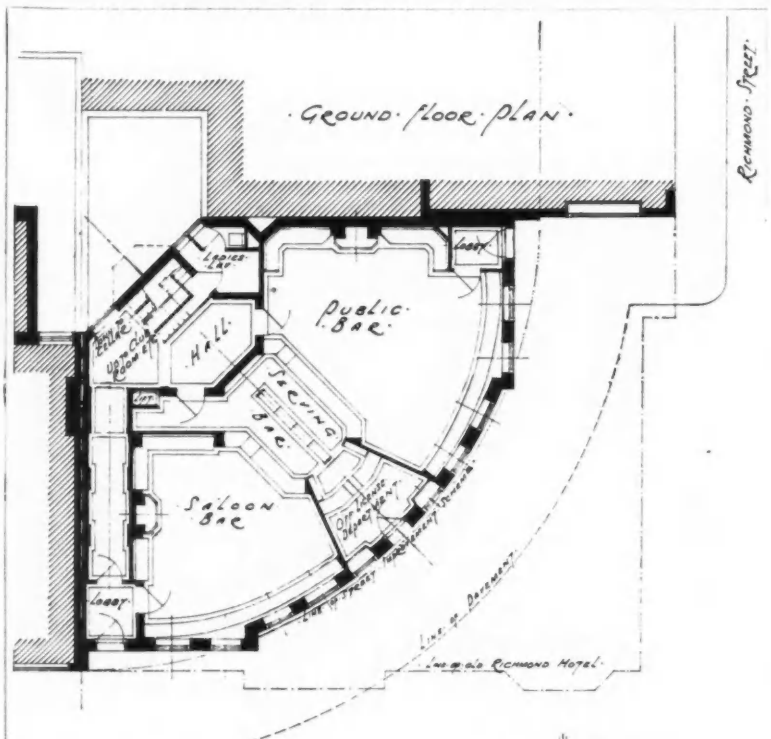
Next Year's Supplements

FROM the next issue onwards, the loose supplements in THE ARCHITECTS' JOURNAL *will no longer be printed on the stiff boards with which readers have become familiar during the year now ending. Instead, a thinner paper will be used, similar to that composing the main body of the* JOURNAL. *The whole of the supplements for 1932 will be produced on this paper.*

It will be recalled that the stiff boards were introduced at the beginning of 1931 in response to many requests for a form of supplement that could be filed for reference in a vertical filing cabinet. Readers who have introduced this system of filing into their offices have written us enthusiastic letters on the new departure. A twelvemonth's trial, however, has taught us that such readers are as yet few. It would seem that nothing resembling a standard filing practice has as yet been adopted by the bulk of the architectural profession. Certainly, vertical filing has won fewer adherents than we were led to believe.

It is recognized that the stiff boards do not make for ease of handling THE ARCHITECTS' JOURNAL. *The letters that have reached us, pointing out this fact, are in a majority. It is therefore only reasonable, pending a more general adoption of modern filing methods, to change over to the more agreeable thin paper.*

The site of the Richmond Hotel, belonging to the Kemp Town Brewery, is at the corner of Richmond Street and Richmond Place, Brighton. These are the fidgetty frontages it used to present to the world.



Richmond Place being an important thoroughfare, the corner has been rounded off, and the pavement set back, under a street-improvement scheme. There is cellar storage and a heating chamber in the basement.

THE RICHMOND

DESIGNED BY

THE planning of the building is adapted to suit the peculiar circumstances of a corner site, with its boldly-curved façade, terminated by pavilion end wings, generally of a Georgian character, having externally-shuttered, line-hung sash-windows, with multi-coloured red facing bricks and stone dressings to doorways and copings. The mansard roof is of sand-faced tiling, pierced with dormer windows and with a balcony treatment at the second-floor level. Bronze enamelled lettering has been affixed to the façade at the lower level, and a neon sign on the parapet for night illumination.

Internally the bars are fitted in the most up-to-date manner, the saloon bar having walnut-faced and inlaid panelling and counter, and walnut fitments with green leather-covered seats. The room is lighted by means of flush ceiling fittings, augmented by bracket lights fixed to peach glass mirrors set in the wall panelling above the seats. The floor of the room is of composition cork of marble pattern, with a star pattern feature in the centre, and the fireplace is fitted with a modern electric fire, with a clock of modern design in the space over.

The wine office has been finished with oak panelling, counter and fitments.

The public bar is fitted with oak

The front of the rebuilt hotel, a steel-framed structure, is faced with multi-coloured red bricks, and has stone dressings to doorways and copings. The roof is of sand-faced tiles, and the lettering is in bronze, enamelled.

HOTEL, BRIGHTON

DENMAN AND SON

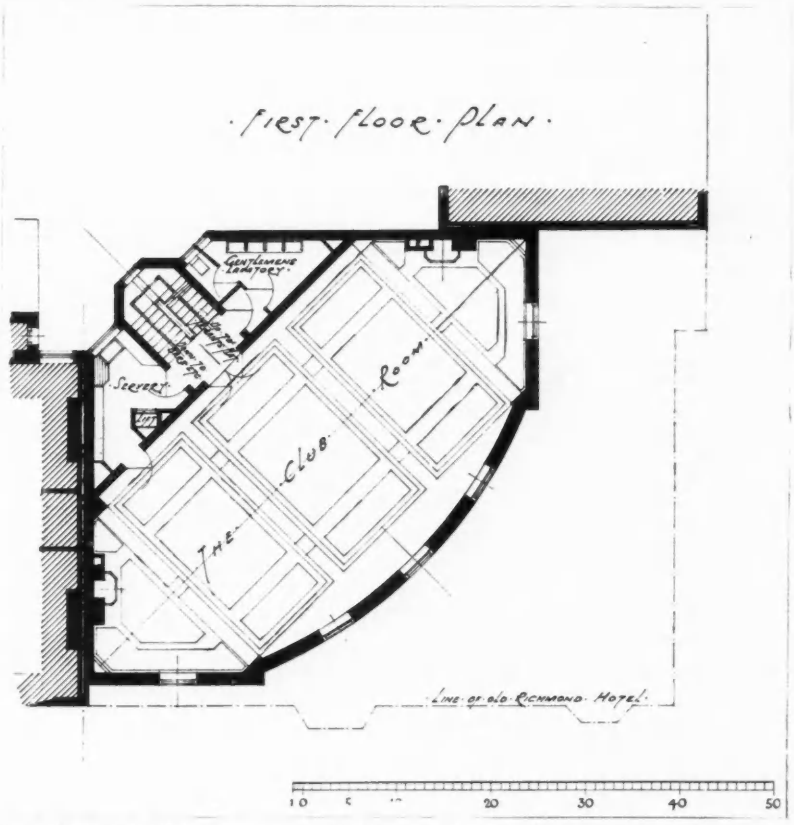
counters, seats and dado panelling, and brick fireplace surround, and lighted with a large ceiling fitting and wall brackets, and has a floor of composition cork in wood block basket pattern.

The corridor and staircase which give access to the large club-room, occupying almost the whole area of the first floor, is finished with terrazzo paving and steps. There is an ornamental wrought-iron balustrade to the stairs; and the walls have been brightly decorated.

The club room is of ample height, with a ceiling of fibrous plaster, walls papered green, and an oak plywood dado. The floor is of oak, and over the fireplaces at either end of the room shaped peach glass mirrors have been placed, the shape of the room and the angle at which these are fixed assisting greatly the general appearance.

Service is by means of a servery adjoining the club room, connected with the kitchen on the second floor over by means of a lift, while lavatories are placed at mezzanine levels for both sexes.

The second floor has been utilized to form a flat for the hotel manager, while the basement gives adequate accommodation for beer cellars, storage and the heating chamber.

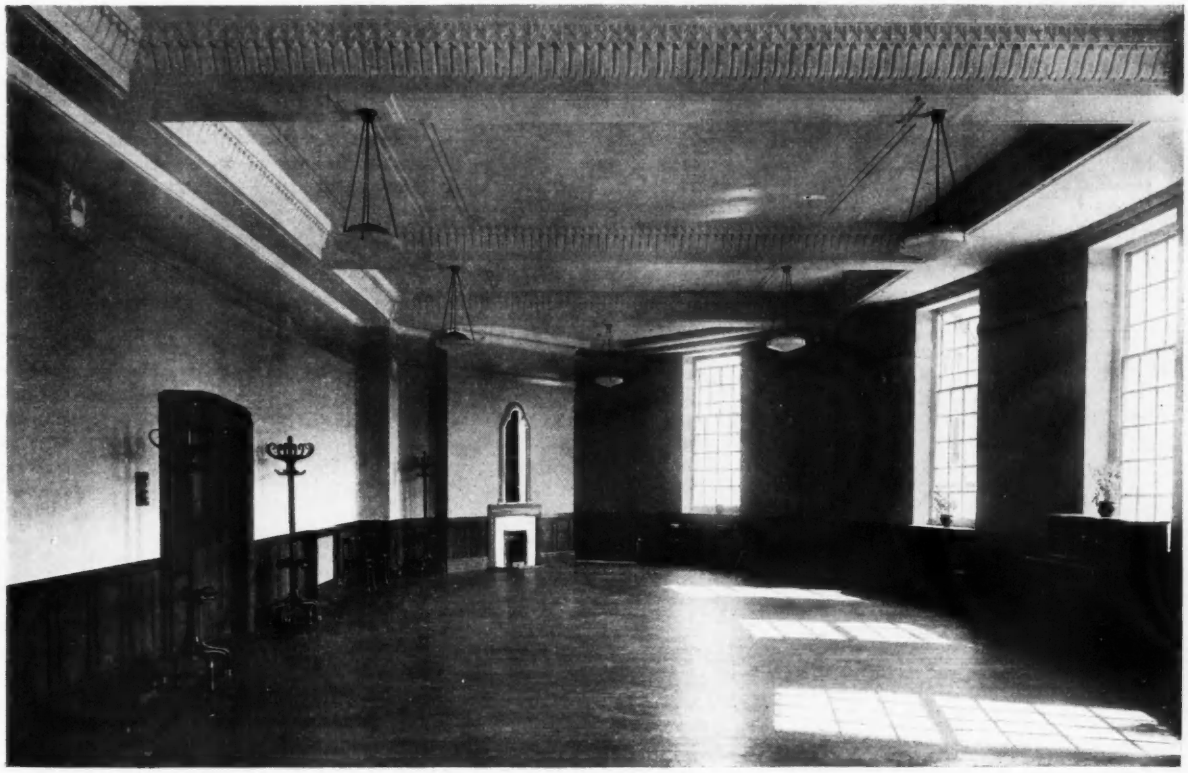


The adjustment of the site suggested planning about a diagonal axis, and gave the opportunity of providing a fine club room with a widely-curved range of windows, on the first floor. Above is the hotel manager's flat.

In the saloon bar : the bar itself. The panelling is walnut-faced and inlaid, and the room has walnut fitments, with green leather-covered seating. One of the flush ceiling lights is seen; there are also bracket lights fixed to peach glass mirrors set in the wall panelling. Behind the panelling on the right is the off-licence department.

Richmond Hotel, Brighton.] [*By Denman and Son.*

In the saloon bar : the fireplace. The fire is of the modern electric type, and reinforces the radiator system by which the whole building is heated. The floor is of composition cork, marbled, and having a symmetrical patterned centre-piece. The door seen on the left is to the entrance lobby communicating with the street.



Richmond Hotel, Brighton.] [*By Denman and Son.*

The club room, which can also be used for the service of refreshments, occupies nearly the whole of the first floor, and describes a rectangle, with the addition of triangles at either end and a very obtuse bow on the side facing the roadway. Entrance is by double doors in the centre of the opposite side. There is a subsidiary door in close proximity to a service lift

THE LONDON REGIONAL PLAN

DR. RAYMOND UNWIN, P.R.I.B.A., technical adviser to the Greater London Regional Planning Committee, states, in *The Times* for Thursday last, that the work of that body, which seeks to secure more ordered development of a wide area round the Metropolis, including the preservation of a green belt and other suitable open spaces, has narrowly escaped an untimely end in the present financial crisis. He points out, however, that this has been averted by the decision of the L.C.C. at its last meeting to continue a grant, though on a very much reduced scale, towards the expenses of the committee for another year. The committee have reason to believe that the contributions from other local authorities will also be continued on a similarly reduced scale, and that therefore it should just be possible to keep up to date the surveys already made, and to issue in due course the report on the proposed planning of the area, for which much of the material is already prepared.

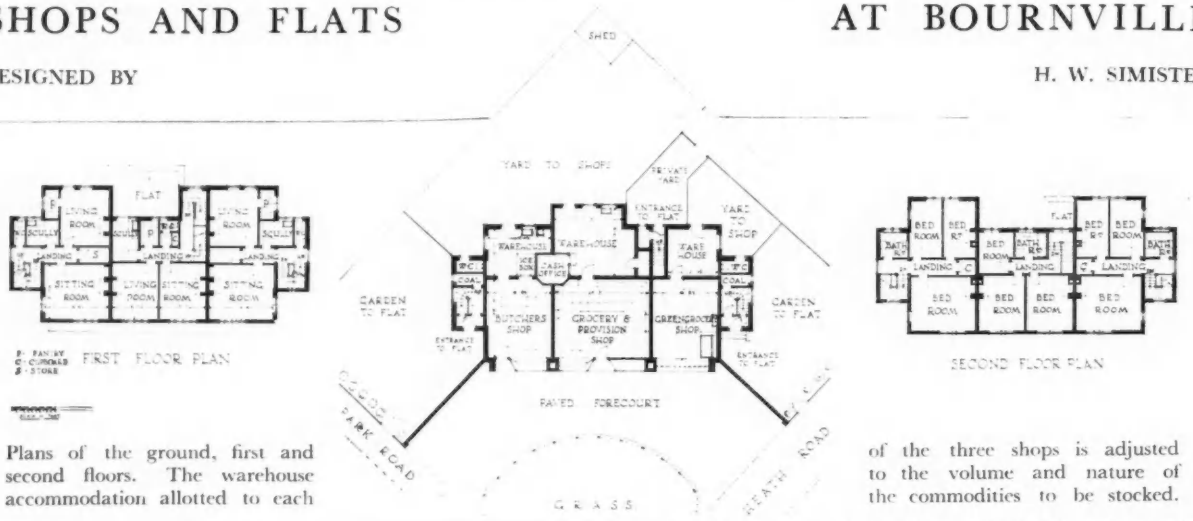
This curtailment, he says, will imply a severe contraction of the work of the committee at a time when its urgency and importance are increasing owing to the rapid developments taking place within the region.

It is evident that many great and difficult problems, needing comprehensive handling, have been created in the outer region, which in addition to its own natural increase of population has had to absorb an annual average of over 38,500 people flowing out from the county area, and anything up to 39,000 flowing inward from the outside. The relative responsibilities for housing, education, health, etc., of the L.C.C. and of the 130 odd local authorities in the outer area, the best way to co-ordinate their efforts and those of private enterprise, and a proper relation between industrial and housing development, are some of such problems. The necessary transport for these large numbers and the enormous volume of unnecessary movement due to the haphazard character of the sporadic building, and to the want of proper relations between the people's dwelling, working, and playing places, present other serious problems. Another problem, urgently raised by the present disorganized development, is that of preserving open space for the growing population.

Before the period of extreme financial stringency arose, Dr. Unwin concludes, there appeared to be good prospect that effective steps would be taken as regards the proposed green belt round London, which would do so much to meet this urgent and growing need for open space. There seemed also every likelihood that the Town and Country Planning Bill would have become law before the end of the year, and that its various new powers would have been available to help in this work and would have afforded the opportunity for the activities of the present advisory body to be put on a permanent basis by the creation of a statutory Joint Committee. Fortunately for the progress of town and regional planning, the present Minister of Health has again introduced the Town and Country Planning Bill, and has announced that the second reading will be taken at the opening of the next Session. If the committee's regional report is to be useful to those concerned, it should be based on the town planning powers and procedure as they may be extended or modified by the Bill. For this and other reasons also it appears desirable in the changed circumstances to postpone the issue of the report till later in the year.

SHOPS AND FLATS AT BOURNVILLE

DESIGNED BY H. W. SIMISTER



Plans of the ground, first and second floors. The warehouse accommodation allotted to each of the three shops is adjusted to the volume and nature of the commodities to be stocked.

THESE premises were erected recently on the Woodlands Park estate, which was in process of development by the Bournville Village Trust, the land on which they stand being leased to the Ten Acres and Stirchley Co-operative Society, Ltd. They comprise three shops for grocery, butchery and greengrocery, together with three flats over, all separately approached and with independent staircases. The main walls are of brick and the roof is of slates. It will be noticed that there are top-hung casements in the bedrooms. The accommodation in the flats is that of a moderate-sized cottage, and gives, in each, living-room, scullery and sitting-room, with three bedrooms and bathroom on the second floor, and the usual offices. As will be seen from the plans of all the floors, reproduced above, the layout is of a compact and practical order, affording main rooms of good size, together with very convenient working quarters.

The site is a prominent one in the middle of the estate, and, being ample for the purpose, the buildings were set on the angle. By this means a paved forecourt has been provided, with an oval grass plot at the junction of the two roads concerned. Two of the flats also have the unusual advantage of gardens.

The shops, which occupy a corner site, with a paved forecourt and oval of turf in front, have three flats, each of five rooms and offices, over, and each with a separate entrance—two, of which one is here seen, being at the front, and the other at the back of the building. Both the side flats have gardens.

THE NEW R.I.B.A. FORM OF CONTRACT

BY MICHAEL HOARE, B.A.

Joint Author of The Standard Form of Building Contract

(The two previous instalments appeared in the issues for December 2 and 16 last)

THE issue of the new form of contract is the outcome of prolonged negotiations between the R.I.B.A. and the National Federation of Building Trades Employers. It is common knowledge that a building owner—or at all events a private building owner—relies largely, if not entirely, upon his architect to advise him as to the form of contract which he shall make with the contractor whom he intends to employ, and it is in the interests of the building owner and not of himself that the architect is concerned in examining the terms of any proposed form of contract. It is in this capacity, therefore, that the R.I.B.A., representing the profession as a whole, has again taken upon itself the task of preparing, in conjunction with a body representative of contractors generally, a form which shall be acceptable to building owners and contractors alike.

In these circumstances it is of importance to examine the reasons for some of the changes made by the new form, which at first sight might appear to be unnecessary concessions in favour of contractors; and in order to understand the effect of these changes it will be convenient to regard them from the point of view of the draftsman of a contract form, whose functions in the present case have been discharged jointly by the two bodies.

The predominant consideration in his mind should be to provide a form of words which shall ensure, so far as the terms of a contract by themselves can ensure, an efficient job at low cost to the employer but with fair remuneration for the contractor; and in view of the nature of the works which are the subject of these contracts, and the unforeseen obstacles and difficulties which so often present themselves while the works are in course of execution, the task of devising a formula suitable for general use is far more difficult than it would at first sight appear.

It might be supposed that a draftsman who had at heart only the interests of the building owner would be well advised to put before a prospective contractor a form of contract whereby the risk of the possibility that the works will ultimately be more expensive to complete than anyone at the outset imagines shall be borne wholly by the contractor. But this, in effect, is asking the contractor to insure the building owner against an almost infinite number of contingencies, and for this every contractor will properly exact his premium by way of a considerable enhancement of price; so that it is plain that the fewer the contingencies of which the contractor is required to bear the risk, the lower will be the prices inserted by him in making up his tender.

What, generally speaking, are the risks which a contractor has to consider when submitting his tender?

First of all, there is always the possibility that the execution of variations or extra works may involve the contractor in a great deal more expense than the mere cost of executing the extra work: in some cases an order for variations might interfere with the progress of the whole of the works and involve the contractor in extra expense compared with which the cost of executing the variation was negligible.

Secondly, it may happen that, during the course of construction, some injury will be caused to individuals or to adjacent property as a result of the execution of the works, and in some cases — particularly in the case of adjacent property—the injury may be such as is necessarily incidental to the performance of the contract. The design of the building, for which, be it remembered, the architect is, as a rule, responsible, or the position of the site provided by the building owner, may make the infliction of some such injury inevitable.

Thirdly, the execution of the works may be delayed by causes over which the contractor has no control. Bad weather or strikes affecting the men employed on the works may easily change a profitable contract into a dead loss.

As we have already observed, it is simple enough but not expedient, even from the point of view of the employer, the building owner, to throw the burden of all these risks upon the contractor; but it would be equally inexpedient to throw the whole burden upon the employer. The task of the draftsman, then, is concerned with apportioning the risk as fairly as possible between the two parties, and it is in this respect that several improvements have been made by the new form of contract.

The 1909 form provided for the authorization by the architect of variations, extras and omissions; and that the amount to be allowed on either side in respect of variations so authorised should be added to or deducted from the contract sum. The amount to be allowed was to be ascertained by valuing the variation at the rates contained in the priced bills of quantities, or, when these might not apply, at rates proportionate to the prices contained in the bills. There was not a word in the contract about making an allowance to the contractor beyond the amount of the valuation so calculated for any extra expense in which he might be involved in executing the variation. As many contractors know to their cost, the execution of a variation upon one portion of the works may cause disorganization and delay, with a consequent increase of expenses generally over the whole works, but such increase would not, under the old provision, form any part of the valuation which is the basis of the extra allowance to the contractor.

The new form has remedied this defect; and, in addition to prescribing the method of calculating the prices to be allowed for extras, provides that, if compliance with the architect's instructions in regard to, *inter alia*, variation or modification of the design, quality or quantity of the works, or addition or omission or substitution of any work, involves expense or loss beyond that reasonably contemplated by the contract, then, unless the architect's instruction has been issued owing to some breach of the contract by the contractor, the amount of such expense or loss shall be ascertained and added to the contract sum. As a consequence, extra expense to the contractor, incurred as the result of executing a variation, though not forming part of the actual price to be allowed for the extra work, will in future be recoverable as "expense or loss beyond that reasonably contemplated by the contract," and an unfair burden upon the contractor will be removed.

The wisdom of this change, as facilitating closer tendering by contractors without involving them in the risk of incurring heavy and unforeseen expenses which cannot be recovered from the employer, is so apparent that its significance from the point of view of the architect, as the building owner's professional adviser, is in danger of being overlooked. In that capacity it is often the duty of the architect to advise the building owner whether it is desirable to call upon the contractor to execute some extra item of work, and in so advising he must, of course, have regard to the extra cost to the building owner which the acceptance of such advice will ultimately entail.

If in any particular case the 1909 form of contract was being used, the architect, in tendering such advice, needed only to have regard to the actual cost of executing the extra work in question, since that alone was the amount which the contractor was entitled to recover. In view of the provisions of the new form, entitling the contractor to recover any "expense or loss beyond that reasonably contemplated by the contract," the architect, when considering the probable cost of ordering extra work or other variations, will have to take into account the consequential as well as the actual cost to the contractor of complying with his instructions before he can advise his principal that any particular variation is desirable.

With regard to injury and damage to persons and property, it will be remembered that the 1909 form provided that the contractor should be responsible for all structural and decorative damage to property and for injury caused by the works or workmen to persons, animals or things, and should hold the employer harmless (i.e. should indemnify the employer against any claims) in respect thereof. This provision took no account whatever of the various ways in which such damage or injury might be caused, and, besides leaving the contractor to bear responsibility for his own negligence, constituted him as insurer of the employer against the consequences of the employer's own negligence as well as the negligence of the architect or any other of the employer's agents.

By the provisions of the new form the contractor is, of course, still responsible to third parties for any injury or damage inflicted by him or by any persons for whom he is responsible, but he undertakes to indemnify the employer against claims in respect of injury to persons only when the injury in question is not due to the "act or neglect of the employer or his servants," and in respect of injury to property only when the injury is due to the "negligence, omission or default of himself his agents or his servants or of any sub-contractor or to any circumstances within his contract."

It will be seen at once that this alteration in the wording of the clause which has done so much to mitigate the unfairness of the provisions of the 1909 form in some measure affects the responsibilities of the architect. The indemnity given by the contractor under that form amounted in effect to a guarantee by the contractor of the architect's design and an insurance of the employer against liability for damage, such as, for example, damage to adjoining property, consequent upon the design of the building under construction. Under the new form, this guarantee and insurance no longer exists, and if the employer is made liable to an adjoining owner for damage due solely to faulty design, his remedy —if in the circumstances he has any remedy—will be against the architect alone.

In this connection it may be convenient to note another change made by the new form affecting the question of liability for infringing the rights of owners and occupiers of adjoining property: this is to be found in the provisions with regard to setting out the works. It will be remembered that the 1909 form provided: "The contractor shall set out the works, and during the progress of the building shall amend at his own cost any errors arising from inaccurate setting out unless the architect shall decide to the contrary." This provision put a heavy responsibility upon the contractor, who had to bear not only the cost of amending his errors, but also the risk of becoming liable in damages for trespass to occupiers of adjoining property. The employer was relieved from all responsibility so long as the site provided was capable of receiving the building shown upon the drawings, however sketchy those drawings might be; and if the contractor, in setting out the main lines of the building, encroached upon some adjoining property, he, and he alone, in normal circumstances was liable for the trespass so occasioned. It is true that the problem of setting out is primarily a builder's problem, but it is clearly unfair to expect him to solve it upon insufficient data, especially if the effect of a mistaken solution will be to involve him in liability to a third party.

In view of these considerations, the new form provides: "The architect shall furnish to the contractor, either by way of carefully-dimensioned drawings, or by personal supervision at the time of setting out the works, such information as shall enable the contractor to set out the enclosing walls of the building at ground level," after which the contractor is responsible as before. The contractor, it will be observed, is still to do the actual work of setting out, but for the purpose of setting out the enclosing walls of the building—i.e. for that part of the process in which there is a possibility of trespassing on adjoining property—he is entitled to have, and to rely upon, carefully-dimensioned drawings prepared by the architect, or upon instructions given personally by the architect at the time of setting out. The contractor's obligation is to follow the drawings or instructions: for the accuracy of those the architect and ultimately the employer is to be responsible.

As to the effect of bad weather, strikes, lockouts and the like upon the ultimate cost of the works, neither the 1909 form nor the new form contain any special provision, and any loss or expense incurred as a consequence of these occurrences is left to be borne by the party upon whom it falls; and, upon reflection, it will be seen that no amendment of the 1909 form could properly have been made in this respect. Fortuitous occurrences of such a nature are outside the control of contractor and employer alike, and the possibility of loss resulting from these occurrences is a risk which is necessarily incidental to the work of every building contractor, and presumably is one in respect of which a contractor can, if he so desires, take out a policy of insurance in the ordinary way instead of attempting to insure himself at the expense of the employer by a general enhancement of the prices in his tender.

[Concluded]

Unemployment Relief for Architects

UNEMPLOYMENT in the architectural profession is reaching alarming proportions, and the Council of the Institute, in consultation with the A.A.S.T.A., have met to discuss a means of alleviating the very serious and widespread distress. The suggestion put forward is that every architect in work should be asked to contribute towards a fund to help architects who are out of work. The money thus collected will be used to provide work as far as possible, and maintenance till work can be found. An outline of the scheme is given in a letter from Dr. Raymond Unwin, P.R.I.B.A., from which the following is summarized:

The R.I.B.A. and the London Society are already taking steps to carry further the survey and planning of London, with special reference to providing practical suggestions for the clearance of slums, and for the improvement of the City which may be a guide for the future. On this work some of those who are out of employment and need assistance can be occupied, thus reviving an organization which proved very useful during a difficult period caused by the Great War. It is proposed that similar steps should be taken in other cities.

Funds will be required to pay men for whom such work can be found, but the number who can be employed under this proposal is obviously limited, and the distress of those who cannot be given work must also be relieved. The method proposed of collecting the necessary money is that all those who do not at present contribute to the National Unemployment Insurance Fund by means of the official stamps, i.e. everyone earning more than £250 a year, should give as a minimum the equivalent, i.e. 1s. 7d. per week, to the Architects' Unemployment Fund; and the employer, also as a minimum, should contribute the same amount per week for every such man in his employment. The money would be collected in the different offices throughout the country and sent monthly to the Secretary of the Unemployment Committee, c/o the R.I.B.A.

It would be of great assistance to the Unemployment Committee if in all offices where the employer or staff are prepared to adopt these proposals, one of their number could be asked to communicate with the R.I.B.A., giving the date when they would be able to commence the contributions.

NEW CHURCH OF ST. ANNE, BLACKBURN, LANCS.

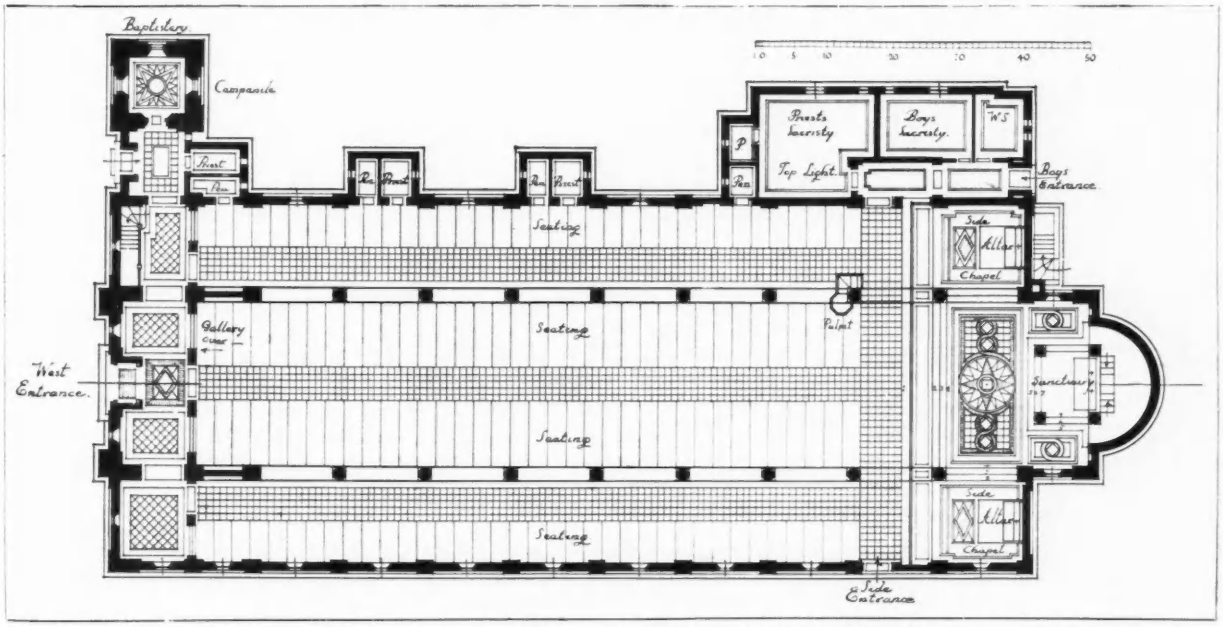
DESIGNED BY E. BOWER NORRIS (SANDY AND NORRIS)

The west end. The designs include a campanile, yet to be built, on the extreme left.

The interior, looking towards the sanctuary. The columns are of Italian marble, from Sienna.

THIS church, erected to serve a very large parish in industrial Lancashire, was designed to provide a large capacity at an economical cost. For that reason the main architectural lines of the building were accentuated and ornament was reduced to a minimum. The style adopted was Lombard Romanesque, and the materials and marble were the simplest of their various kinds. The exterior was carried out in a small local brick, with white joints, and the stone dressings are of local sandstone. A campanile was designed to complete the architectural group, but, owing to lack of funds, the lower portion only, which also serves as a baptistry, has been built.

In the interior, devotional effect is due to the colour of the marble columns, which come from Sienna, Italy, and the stained-glass windows, which relieve what might otherwise be a tendency towards monotony. The apse at the sanctuary end is to be covered with mosaic, and the walls of the sanctuary are to be lined with marble. The floors are of oak wood blocks under all seating, and are laid with strip rubber in the aisles.

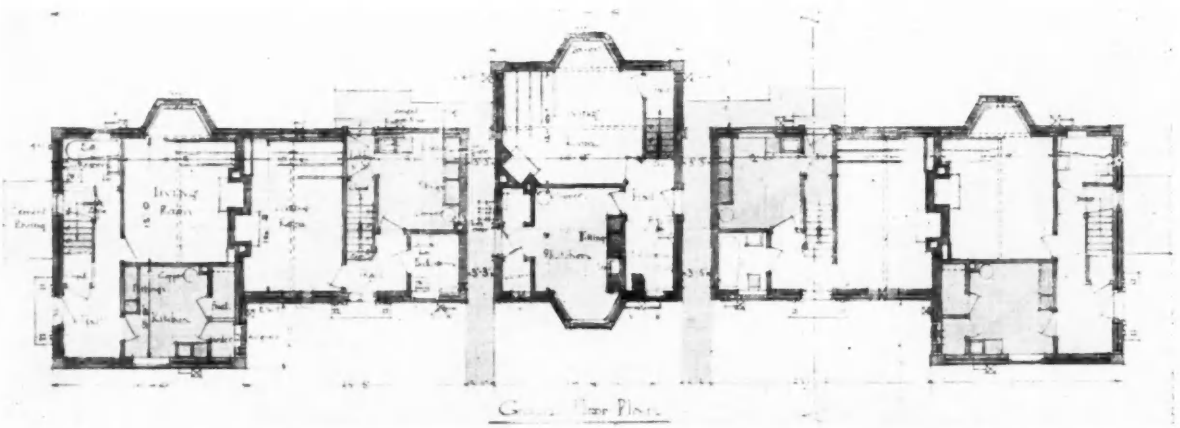


The ground plan. A straightforward layout and the use of simple materials were dictated by the need for economy.

DOUGLAS HAIG MEMORIAL HOMES AT PENZANCE

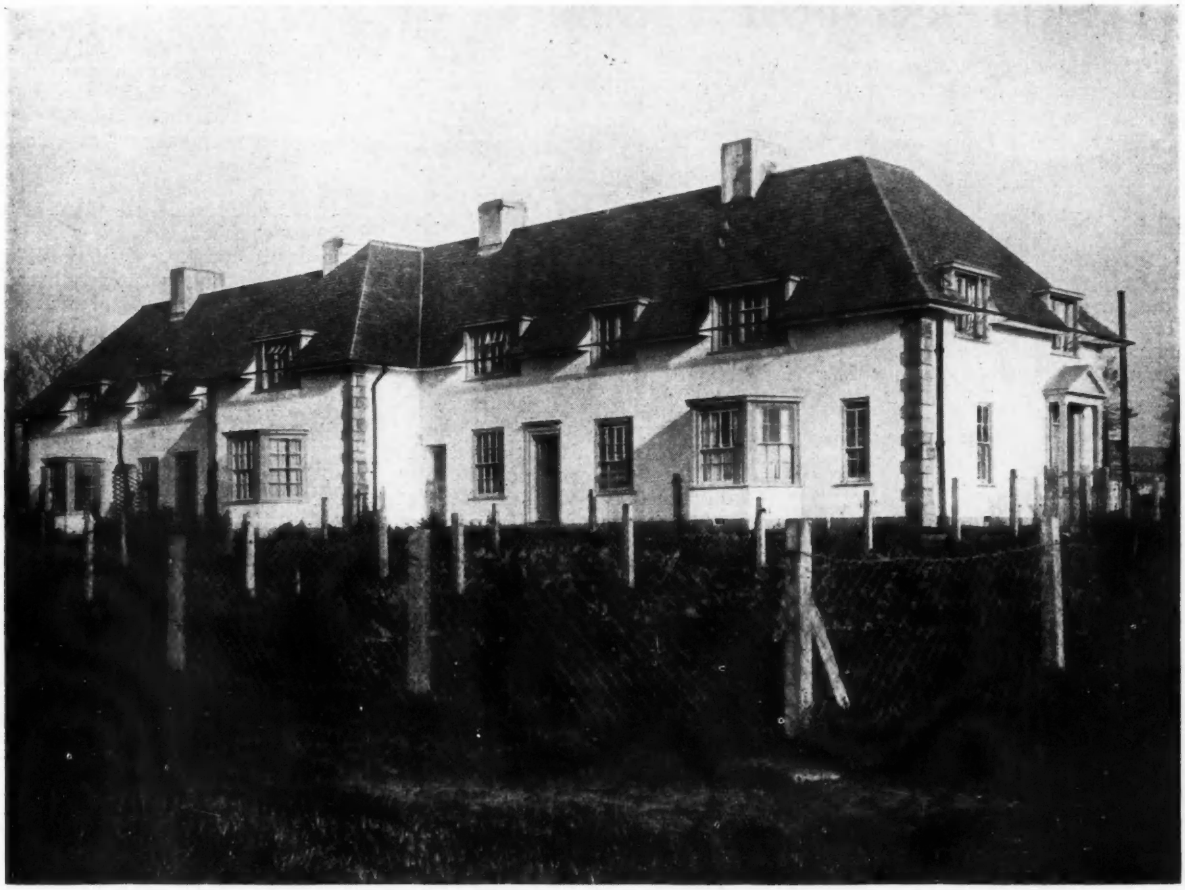
DE SOISSONS AND WORNUM — *Joint Architects* — COWELL, DREWITT AND WHEATLY

The north-east front and south-east end. On the right are seen the walls of the entrance forecourt with, on either side of it, garden space. Each home has its separate entrance. Two of these are seen above; the arrangement of the others will be followed from the plan reproduced below.

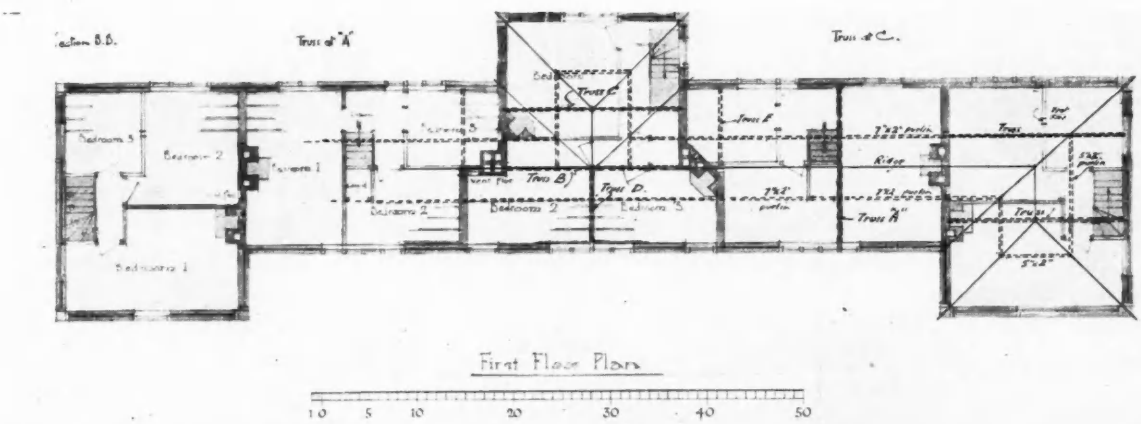


In each home there are, on the ground floor, hall, living-room, kitchen and bathroom, besides larder and fuel store, etc.; three of the living-rooms have bay windows facing south-west. There are two entries running through the block on the ground floor; both give access to the centre house.

THE housing scheme here illustrated provides five homes for disabled men under the Douglas Haig Memorial organization. It was built on a site at Heamoor, Penzance, Cornwall, which was presented by Colonel E. H. W. Bolitho. The land available resembles a T with a very heavy head and the foot pointing north-east, which is therefore the aspect of the main front of the building. This narrow foot forms an entrance drive, between adjoining properties, from the main road, and has been planted on either side with Lombardy poplars inside a concrete



The south-west front. The walls are built of brick, plastered, with dressings and quoins of granite. The roofs are covered with small green Cornish slates. It will be noticed that the rainwater gutters are carried in an unbroken line across the dormer windows, wherever these occur.



On the first floor there are provided three bedrooms apiece to all the houses, one with a fireplace (two in the centre house). In all cases the rooms are graded in size, and all are of ample dimensions. They are all lit by dormer windows having top-hung transom ventilating lights.

wall. The buildings occupy the centre of the head, have before them a grassed forecourt, with a paved surround, and are enclosed by allotments and by gardens, in each of which a timber shed has been provided.

Each home is self-contained, having its own separate entrance, and separate staircase to the bedrooms on the first floor. The accommodation given consists of a hall, living-room, kitchen, bathroom, etc., on the ground floor, with three bedrooms above.

The buildings are timber-framed. The outside walls are of 9 in. brick, plastered, with granite quoins and dressings. The roofs are covered with small green Cornish slates.

LETTERS FROM READERS

Architects and Advertising

SIR,—At the present time many members of the architectural profession are unable to earn a living owing to the shortage of work. I believe that this is not so much due to the slump as to the fact that the profession has failed to adapt itself to the changed conditions since 1914.

There are no longer enough five- and ten-thousand pound houses to keep us all busy; we must, therefore, look for clients among that larger class which can only pay £750 to £1,500 for their houses—the class which has hitherto been accustomed to buy the badly planned and ugly villas provided by the speculator. The prospective householder of this class believes that architects are only for the rich, and because the profession makes no effort to deny this or to explain why it would be worth his while to employ an architect, he quite naturally buys the builder's house.

As architects, we are not pulling our weight in the community—the country is rapidly being covered with rows of half-timbered rubbish, many of us are out of work, and yet we do nothing about it.

If the standard of housing is to be raised, it must surely be by the efforts of the architectural profession. This can be achieved in two ways : by the example of cheap, well-designed houses and by newspaper publicity. The former can be seen at Welwyn and elsewhere; the latter has never been tried in England, but has been adopted in Germany and America. Newspaper publicity will reach people who have never seen the best housing schemes, and who have not the faintest idea of the uses of an architect.

I suggest to your readers that the time has come for the R.I.B.A. and similar bodies to launch an advertising campaign in the newspapers and non-technical magazines, explaining the services which the architectural profession has to offer, what these services cost, and why it is in the interests of the public to employ an architect for all building work.

The public do not know these things, and it is merely common sense that we should tell them.

ANTHONY MINOPRIO

British Roofing Materials

SIR,—I have followed with interest the recent notes in the Press regarding the importation of foreign roofing material into this country. Will you permit me, therefore, to make a few observations on the subject which I think are pertinent at this juncture ?

In the past, Welsh slates have been widely used in this country for roofing houses and other buildings. Their life is known to be approximately a hundred years, and innumerable cases are on record where they have stood for much longer periods.

It is true that imported foreign roofing material can be obtained at cheaper prices than Welsh slates. However, the question of maintenance costs is just as important as initial capital outlay. It has been stated that some of the foreign material used in British housing schemes has proved so unsatisfactory that re-roofing with British material has been necessary within a short time. It would certainly be interesting to know the whole truth of this matter. In the long run the British product wins.

The question of providing employment for British workers is of paramount importance. "Buy British" should be the universal slogan. By using Welsh slates, local authorities, architects and builders can safeguard their own interests, and can also alleviate distress in the quarry areas.

PATRIOT

Plaster for Concrete Ceiling

SIR,—I was very interested in the letter on "Plaster for Concrete Ceiling," because of the importance to reinforced concrete that an efficient method shall be found to clothe it. I quite agree with your correspondent as to the difficulties in obtaining an adequate "key" to concrete. We have had experience of various liquids designed to provide this "key" through the medium of the retardation of the setting of the cement on the surface of the concrete.

Our experience is that the results of this method are quite satisfactory, and with it there appears to be no reason why single-coat work should not be used for the plastering, except that three-coat work is usually specified in order to allow sufficient thickness to compensate for irregularities in the level of the concrete. This irregularity is not necessarily the result of bad workmanship. It must be remembered that the concrete is cast on a temporary staging. This staging is usually made of timber; however carefully the timber work is executed, there must be a certain amount of warping while the timber is in position waiting for the concrete.

Again, the dead weight of the concrete has to be supported by the timber, and there must be a certain "take up" under this load, both as a slight deflection in the timbers themselves and a compression at the joints. This "take up" will be irregular, owing to the various strengths of timber scantlings and varying softness of the wood—for example, where a transom rests on a prop, the initial contact is probably at a few points only, which will compress under the load. This compression will vary according to whether the contact is at a knot or at a soft spot.

Again, it is necessary to allow a certain amount of camber in a floor, to compensate for the "take up" in the centering, and the deflection of the floor under the dead load when the centering is struck. It is impossible to design this camber accurately because, in ordinary circumstances, it will come out to varying degrees. In consequence, it is impossible to guarantee that any floor soffit will not vary less than ¼ in. either way, making ½ in. in total. This variation is quite apart from any slight errors in workmanship.

If, therefore, it is necessary for the finished ceiling to be dead level, a certain thickness is required for the plaster in order to make up the variations. It may be a moot point as to whether exact alignment is really necessary; although a variation is not apparent in the middle of the ceiling, it is usually important at the cornices, the degree of importance depending upon the nature of the cornice selected.

I think the main difficulty is that the thickness of the plaster has to be specified before the floors are cast. In actual practice it might be possible to use a one-coat process on one-third of the ceilings, a two-coat process on another one-third, and a three-coat process would be necessary for the remaining third. In order to cover himself against eventualities, it is usual for the architect to specify three-coat work at the beginning. Difficulties in altering the specification after the contract is let usually result in the three-coat specification being used throughout.

DOUGLAS H. GREEN
(THE TRUSSED CONCRETE STEEL CO., LTD.)

"The Seven Deadly Sins"

SIR,—A young doctor came to me some days ago and asked me about a wood carving entitled "The Seven Deadly Sins." He was very desirous of knowing the location of this piece of sculpture. Can any of your readers help with the necessary information ?

REGINALD E. McCAUGHAN

Conversion of an Old Fireplace

SIR,—The conversion of an old fireplace into a modern one, re-using the old flue, means a beautiful-looking but intolerably smoky result. Can any of your readers relate what successful methods they have adopted in such cases ?

T. R.

[The Editor would be glad to publish readers' experiences on the above subjects.]

HOUSING AT HOME AND ABROAD:

TWO RECENT BOOKS REVIEWED

A general view of Newlyn House, East Hill Estate, Wandsworth, S.W. The development of this estate was completed in June, 1929.

L.C.C. HOUSING

THE novel architectural forms which post-war Continental housing has assumed have served to attract the attention of English architects to an extent that obscures the magnificent record of house building in this country. Worse still, our generous praises of other peoples' work have engendered an idea that we have not much to show.

The reverse is the case, for this record of L.C.C. housing over three years proves abundantly that we have not only completed an unparalleled amount of building, but that we have maintained, and raised still further, standards of living not reached by other countries.

The work of the L.C.C. can be divided into three main branches: cottage estates in the suburbs, block dwellings in urban areas, and similar dwellings built upon congested and unhealthy sites.

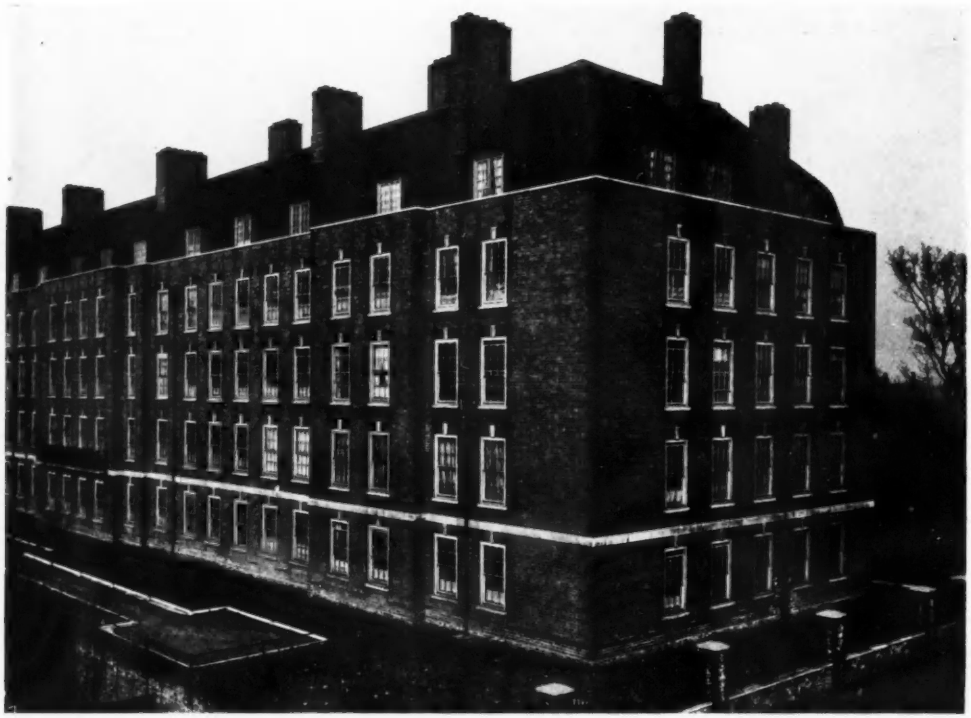
The three proceed concurrently, though after the war, so acute was the need for houses that urban rebuilding gave place in the main to the building of large cottage estates upon cheap land on the outskirts of London.

Every few years the policy has been reviewed in order that housing should follow real needs, so that we find that at the moment, while the St. Helier estate is being rapidly completed, there is a significant programme of clearance and improvement in the heart of the congested urban centre.

The housing estate work is too well known to require comment here, though it should be said that the effect of so much gathered together in one volume is to underline the value of the L.C.C. contribution, and to increase our respect. Move in any direction through London and you will find the well-proportioned Georgian architecture of the L.C.C. dwellings. Whether it be Streatham, Hammersmith, Westminster,

[*From* L.C.C. Housing, 1926–30.

Nos. 19 to 30, Watergate Houses, Hughes Fields Estate, Deptford. Completed in 1930.



Moffatt House, a five-story block of dwellings on the Comber Estate, Camberwell, S.E. Completed October, 1928.

[*From* L.C.C. Housing, 1928–30.

or as far afield as Wapping, their pleasant brick façades and dark tile roofs cut through masses of depression, bringing order, symmetry and something of elegance to dirty chaos.

One may complain of uniformity and standardization, but never of dullness, for the days of Peabody barracks are over, and the re-housed of London have an enlightened landlord, whose care for his tenants' standards of living comprehends the psychological effect of pleasant architectural environment.

Pity it is that these remodelled areas have to make the best of bad conditions, and cannot be related in anything but a fortuitous way with a town plan of London as a whole.

Be that as it may, I wish those who so constantly enlarge upon the wonders of Continental housing would make the tour of the buildings shown in this book. I think they would agree that while the schemes lack nothing of the science and proper study of dwelling and house building, they speak in every line the true and native style of English architecture. The Ossulston estate is a perfect combination of these qualities, and this is but one of many.

F.

L.C.C. Housing (1928-30). London: P. S. King and Son, Ltd. Price 2s. 6d. net.

From L.C.C. Housing, 1928–30.]

The courtyard of Chamberlain House, on the Ossulston Estate, St. Pancras

Harvey House, situated at the junction of Merceron and Brady Streets, on the Collingwood Estate, Bethnal Green.

From L.C.C. Housing, 1928–30.]

MODERN HOUSING

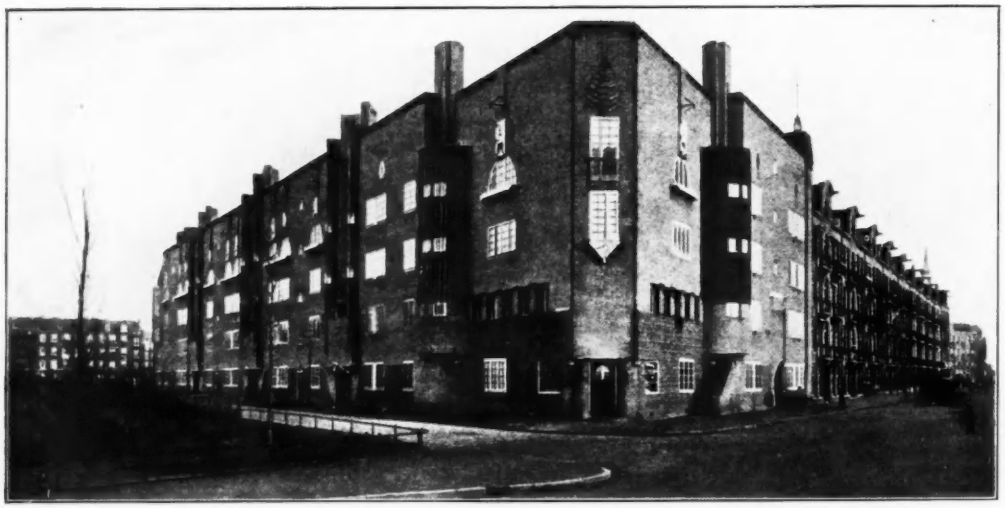
THIS book, now enjoying its third impression since May this year, gives a review of present housing requirements in Great Britain, a *résumé* of post-war work at home and abroad, and some practical suggestions for the future. Every country in Europe, of course, and even America, has its post-war housing problem. Thus it is intensely interesting to accompany the author on his illustrated tour round the civic housing developments in the United States, France, Belgium, Holland, Germany and Vienna, with a brief glance at the other countries in Europe, and then make some comparisons with developments at home.

Reviewing the post-war requirements and conditions of today, he asks, "How many . . . realize that nearly a million people in Scotland are still living in conditions of overcrowding to the extent of more than three persons per room (rooms including kitchens, living-rooms and bedrooms)? Or . . . that half the population of the whole country is living more than two per room? Or . . . that more than half of Scotland's population is living in one-roomed or two-roomed houses? Over half a million children under ten are being reared in two-roomed houses, and probably some quarter of a million in single-roomed houses."

Then again it is staggering to learn that "the average overcrowding in Scotland is worse than the worst

[*From* Modern Housing

Workmen's dwellings in Frankfurt. Designed by Ernst May.



Block of flats in Amsterdam. By the late de Klerck.

[*From* Modern Housing

conditions in England, which exist on Tyneside. . . . All the highest places in this race for the greatest misery in overcrowding conditions are taken by Scottish burghs and the municipal wards of Glasgow with their appalling figures . . . three times as bad as the average for all England, with the slums of London, Manchester and Birmingham included."

An outstanding feature of the book is the very fine collection of illustrations of dwellings in various countries. Among the many schemes of more than usual interest are a slum-clearance housing block in Grand Street, New York, by Springsteen and Goldhammer; a block of flats in Amsterdam, by the late de Klerck; and the workmen's dwellings in Frankfurt, by Ernst May; and the author's comments are no less interesting.

In the case of the New York scheme there is no suggestion of philanthropy. It is the result of a self-supporting, business-like venture, economically as well as humanistically sound; it represents a landmark—with its recreation roof-gardens, one for adults and another for children, and its drinking fountain—in the housing development of New York City.

The Amsterdam flats have circular stairs, and the shape of those stairs shows to the outside because it suits the plan of the block; cantilevered pulley-blocks for raising furniture also show, because they are the necessary and economic method of installing the massive heirlooms than the Dutch folk have not yet learnt to replace by more efficient furniture !

But perhaps the most interesting of all is the workmen's dwellings in Frankfurt. Here the building is of "saw tooth" design, with the windows pushed out as far as possible into the sunlight, and there are individual gardens on all the roofs, even although there are common gardens in the area enclosed by the block. The relief of any monotony that might be threatened by such a large block constructed of standardized units is accomplished by the use of coloured roughcasts. The wall to first-floor height is blue, and above that white; this colour is further varied by the brown wing walls in the background, and the "whole effect, with the enclosed green space, is most charming—and all obtained for very little more cost than the monotonous uniformity of grey walls."

The author puts forward many arguments in favour of "cavity walls," and advocates the adoption of the flat roof, so that we can make more use of the tops of our houses.

Modern Housing. By John R. H. McDonald, B.SC., A.M.INST.B.E., with a preface by Sir William E. Whyte, O.B.E. London: John Tiranti & Co. Price 25s. net.

[*From* Modern Housing.

Grand Street Re-housing Development, New York. Designed by Springsteen and Goldhammer.

MODERN ARCHITECTURE: A LAYMAN'S VIEW

BY E. H. BLAKE

THERE is a belief cherished by laymen the world over, that no one is so competent as themselves to grapple with the intricate problem of architectural criticism. Our views on some of the other arts—on painting and music, for instance—may not always be quite precise; but in the case of such familiar objects as buildings, we are most of us ready to demonstrate with confidence our enthusiasms and our prejudices. We may not know the difference between plinths and pediments; but we do know, and with an instinctive certainty of its merit, we *do* know what we like.

The revival of public interest in architecture is accompanied, and no doubt stimulated, by the dispute which rages today in almost every civilized country over the form of architectural design. The struggle centres, of course, around the question of the style most suitable to the new materials of steel and reinforced-concrete. On the one hand, the moderns insist that these materials, having produced something like a revolution in architectural practice, demand a form expressive of themselves and of the mechanical age that has produced them—a form stark and geometrical, unweakened by the outworn decorations of the past. On the other hand, the more formal practitioners of architecture, while admitting the inappropriateness of dressing the new materials exactly in the old styles, complete with every detail of classical convention or Gothic ornament, do still assure us that the forms and motives of the past can be developed and adapted to meet the new facts of construction, and that, only so, can the tradition of fine building be preserved.

Before we allow ourselves to be drawn into the contest on either side, let us scrutinize a little more closely the theory that provokes so much interest and so much rancour. It may be formulated in three simple axioms:

First: That architecture, to be good, must be straightforward, logical and truthful. The *appearance* of a building must correspond with the *facts* of its construction. Good building must reveal the mechanical laws upon which its structure depends. Everything that conceals or disguises the real structure, such as classical ornamentation on a steel building, is false, ugly, and architecturally vicious.

Secondly: That architecture, to be good, must be not only straightforward and truthful, but also economical in structure, and exactly appropriate to the purpose for which it is to be used. There must be no waste either in materials or decoration. The building that is functionally perfect (that is, economical and practical) is bound to be, in the modern view, artistically satisfying.

Thirdly (and this is really only a guide to the application of the two preceding axioms): That, in the modern world of machinery, we must learn the practice of structural truth and structural economy not from the traditional schools of architecture but from the engineer—the engineer who, says Corbusier, "inspired by the law of economy, and governed by mathematical calculation, puts us in accord with universal law." And in consequence of this engineering inspiration, all good building will assume mechanical forms. "We claim," says Corbusier, "in the name of the steamship, of the aeroplane, and of the motor car, the right to health, logic, daring, harmony, perfection."

In short, say the modern school, it is only by making use of the new materials for building and decoration, in forms distinctively mechanical, that we can achieve a domestic architecture, consonant with modern ideas of hygiene, and satisfactory to the modern intelligence.

It is almost entirely an urban style. Mechanical architecture does not yet seem to have adapted itself to the countryside. But in whatever surroundings they may be built, it is difficult to conceive of anybody wanting to live in houses like these, except the advance guard of the modern movement itself, and even they will probably sicken of them before long, just as their predecessors sickened of the naturalistic forms and the built-in inglenooks of the *art nouveau* of the nineties.

We may all of us be in revolt against the stuffy over-decoration and the distracting gimcracks of the Victorian age, but we still want books and pictures; we still want colour and pattern. And we want, too, the privacy that can only be got from the use of curtains; and the quiet that can only be got from the use of rugs—and from plumbing that is both thoroughly concealed and insulated. We do not find in concrete a suitable or pleasant material for domestic building; and we fail to see that a steamer's superstructure presents the most appropriate or even the most healthy model for an urban dwelling.

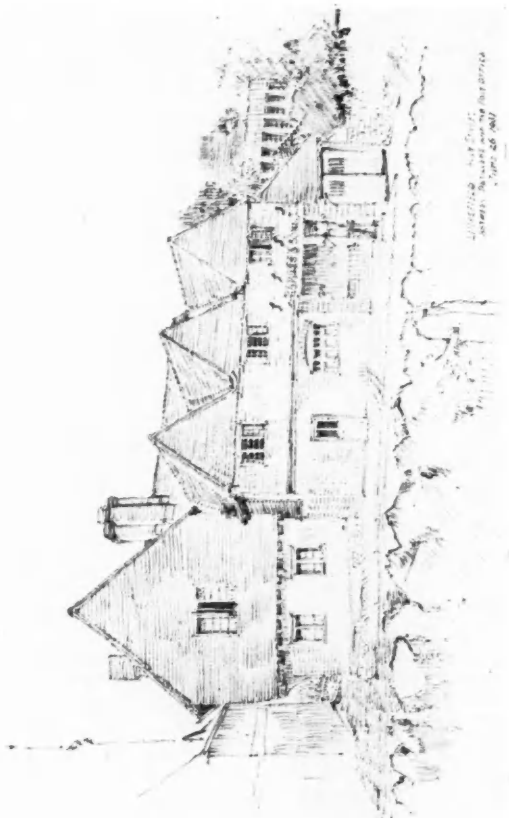
Now I believe that, in this prejudice against the logical creations of modern architecture, and in this preference for traditional forms, we, the general public, and our architects here in Ontario, who apparently agree with us, are right—*actually theoretically right;* for I am convinced that in its extreme form the theory of modern architecture is a false theory. I believe that the two plausible axioms of the modern doctrine, the axioms of structural truth and structural utility, are, when taken in isolation, equally false.

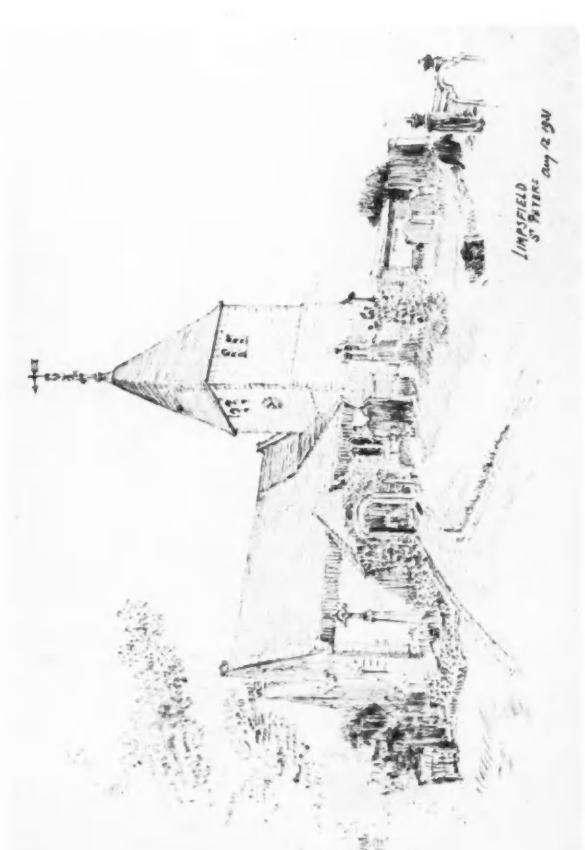
Are the Doric columns of the Acropolis, which M. Le Corbusier in his traditional moments so much admires, adequate only to their task? No. They are excessive, excessively wasteful. Is Michael Angelo's dome of St. Peter's truthful, straightforward construction? It is not. To contain the thrust occasioned by its imposing height, it requires a series of six great chains concealed in the masonry of the drum. Do the side buttresses of St. Paul's reveal their function? They do not; because Wren, in pursuit of a great design, deliberately concealed them behind a false façade. Yet the Greek Temples would look grotesque with entablatures supported on spidery columns merely adequate to their purpose, like Corbusier's City on Wings; St. Paul's, with its buttresses all exposed, would be the sad skeleton of its full magnificence; and St. Peter's, with a squat, self-sufficing dome, would be a squat, disproportioned church.

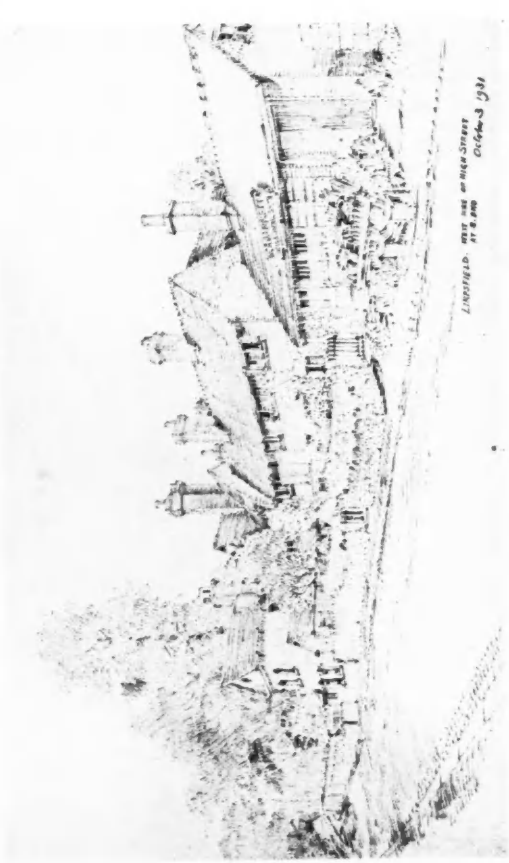
Architecture is, in the same sense as is literature, a traditional art. It is a continuing and ever-developing process that has its roots in history and custom, in climate and country. Today it is the fashion to talk of a revolution in architecture. There can no more be a revolution in architecture than there can be a revolution in literature, though we hear of that, too.

Architects in every country today are confronted afresh with the age-old problem of subduing new methods of construction and new materials to the central purpose—of design. In this contest, old conventions are often being modified; old styles and familiar decorative motives are being re-treated and re-formed. But the best work of our day, work that is truly modern, is still informed by the living spirit of tradition; and composition, that is, the abstract disposition of material in coherent form, takes, as it always has taken in fine building, precedence over structure and utility.

Extracts from a paper read at an exhibition of architecture at Toronto.







FORTY-FOURTH SESSION

THE SKETCH CLUB

MR. ARTHUR KEEN'S SKETCHES OF OXTED AND LIMPSFIELD

QUESTIONS THAT ARISE

Cracking of Plaster

M. C. L. writes : "*An acquaintance of mine recently came to me regarding a bungalow he had built in 1923, which was of brick construction with a roughcasted exterior. During the past two years a horizontal crack, running round the house and penetrating the thickness of 9-in. walls at a height of approximately 5 ft. from ground level, has appeared. He has had the plaster cut out twice and repaired, but still the crack persists. The house was, to my knowledge, properly constructed on good foundations, and I would like your expert's opinion as to the cause, and a suggested remedy.*"

Any reply to this question must necessarily be in the form of suggested lines of inquiry.

1 : The height mentioned rules out the likelihood that the walls have moved on a bituminous dampcourse, but suggests that untied roof-pressure may be tending to bend the walls at that point, which presumably would coincide with the level where the greatest number of external openings reduce the solids and voids to their lowest proportion. A bungalow roof is apt to be of wide span and flat pitch—producing this tendency. If confirmed, the remedy is obvious.

2 : The possibility of the existence of hoop iron or metal bonding may presumably be dismissed—if present it might be oxidizing and swelling.

E. G.

Cavity Walls

B. S. writes : "*I have been interested in the controversy that has recently been waged in your* JOURNAL *on the subject of cavity walls. In your issue for November 25, under the heading of 'In That Contingency,' the answer given by the Building Research Station to the architect for a syndicate is not, in my opinion, a very careful one. As he is quoted, the architect who asks the question about his proposed alternative to a cavity wall does not criticize the cavity wall on the grounds of possible inefficiency. Of course, in his letter he may have done so, but there are other objections which weigh with some of us.*

"*Again, the Research Station writer says that there would be a difficulty in making the cement mortar waterproof round any ties, though the architect appears to indicate that he intended no ties, which, indeed, in the type of building indicated, would hardly be necessary if the work were properly carried out. I am not advocating this type of construction, but I do think that the possibility of some such form of construction with a waterproofed cement might be worth consideration, and that careful attention to the subject and clear thinking are demanded.*"

In connection with the criticism levelled by your correspondent at our reply on the efficacy of a wall constructed of two leaves of 4½-in. brickwork with the 1-in. space between the leaves filled with cement mortar, our original published reply to this inquiry made it clear that a wall of this construction had not been subjected to test at this Station, and that the observations given in the reply were based on our knowledge of the principles involved in the movement of moisture in walls, consideration of the materials to be used, and the structural defects attendant on the use of these materials.

It is very questionable whether a wall constructed in the above manner, even with a thoroughly compacted mortar core, without ties, would be as stable structurally as either a wall of 9-in. bonded brickwork or an ordinary 11-in. cavity wall with ties. It was considered that to make the two leaves act as one unit some form of tying, other than that which may be provided by the mortar core, would be essential.

In conclusion, for your correspondent's information, I may state that it is easily conceivable that the structural defects likely to occur in an ordinary cement mortar core would be in no way less liable to occur with a mortar core containing a waterproof cement, or one containing a waterproofing admixture.

P. W. BARNES
(FOR DIRECTOR OF BUILDING RESEARCH)

SOCIETIES AND INSTITUTIONS

THE R.I.B.A. INTERMEDIATE EXAMINATION

THE R.I.B.A. Intermediate Examination qualifying for election as Student R.I.B.A., was held in London, Manchester, Newcastle - upon - Tyne, Plymouth and Edinburgh, from November 20 to 26, 1931.

Of the 194 candidates examined, 80 passed and 114 were relegated. The successful candidates are as follows :

Armstrong, G. W.
Ball, J. C.
Bond, L. H.
Bonsall, R. E.
Broadbent, J. M. (Miss)
Carmichael-Anstruther, W. E. F.
Chambers, J. C.
Choate, K. H.
Clarke, A. L.
Clavering, J. C.
Collins, E. W.
Cooper, A. E.
Couch, A. C.
Dewing, F. M.
Dexter, K. P.
Dickinson, N.
Dixon, C. J.
Dunton, J. G.
Duxbury, L.
Eyles, R. E.
Fielding, J.
Firmin, E. H.
Fletcher, F. J.
Gedge, J.
Gerrard, A. E.
Gick, M. C.
Goodey, W.
Gregory, F. W.
Grigg, L. J.
Haiselden, T. J. W.
Harding, A. J.
Harper, W. S.
Harrison, R. A.
Harrison, W. T.
Hart, C. A.
Haward, B.
Hobday, H. H. J.
Hogg, J. S.
Hough, E.
Hoyles, F. H.
Jackson, H.
Jackson, R.
Lanchester, H. R.
Lloyd, D. E.
Mackley, H.
Mence, S. R. G.
Mould, N. W. C.
Murphy, L.
Negus, P. G.
Oliver, G. H.
Orchard, H. J.
Overend, A. B.
Pike, C. H.
Pritchard, F. T.
Roberts, R. J. S.
Roles, V. H. N.
Rowe, O'Brian J.
Ruddiman, A.
Sadler, E. H.
Salt, G. E.
Saville, J. E.
Smalley, E. A.
Stallard, E. G.
Stevens, K. A.
Stowell, R. R.
Suggitt, J. A.
Tagholm, C. G.
Thompson, J.
Trollope, W. W. J.
Watt, G.
Weegmann, H. C.
Weston, N. E. G.
Williams, G. L.
Williams, J. W.
Wise, A. H.
Wood, E. J.
Woodhouse, J. S.
Wormell, R. T.
Wrathmell, T. B.
Wright, F.

LIVERPOOL SOCIETY OF ARCHITECTS

Lord Gerald Wellesley, F.R.I.B.A., lecturing on "Borromini" at a meeting of the above society, said he thought a revival was upon us of interest in the late phase of Italian art, and Italian baroque was a vast and untouched field. Borromini was the greatest and most representative and most influential of baroque architects.

The nineteenth century felt a moral disapproval of the turgid magnificence of baroque, but the twentieth century was realizing that misplaced humility was quite as ludicrous as misplaced magnificence, and that it was absurd to admire what was humble chiefly because it was humble. When that absurdity was fully recognized, Roman art of the seventeenth century would come into its own, and it would be seen that at no period in the history of modern art did talent find more opportunity of expression, and at no period was the creative artist less hampered by restrictions, technical, financial, or political.

OLD MANCUNIANS ASSOCIATION

The 132nd dinner of the Old Mancunians' Association was held, on December 19, for the first time in the Memorial Hall of the new building, designed by Dr. Percy Worthington, F.R.I.B.A., and Mr. Francis Jones, F.R.I.B.A.

Dr. Worthington, replying to the toast of "The Architects," proposed by Mr. Maxwell Reekie, said that this was a most unusual experience for an architect. They might have noticed that in press accounts of buildings there were usually photographs of the building committee and the mayor, but the architect was nowhere to be seen. Also, when a man had a house built and invited his friends to see it, he always managed, if he liked the house, to give the impression that he designed it himself. If the stairs had been left out, then, of course, it was the architect's fault.

The business of the architect was primarily that of a burglar. He had to pick the brains of his client and find out

exactly what he was after, and then represent it in bricks and mortar.

Mr. Francis Jones also spoke.

GLASGOW SCHOOL OF ARCHITECTURE

Mr. J. R. Richmond, speaking at the prize-giving ceremony at the Glasgow School of Architecture, said though the world seemed impoverished at present, there would be opportunities for architects with courage and imagination to meet the demands for new construction brought about by the rapidly changing conditions due to scientific discovery.

He had no doubt students were being told they were entering upon a profession already overcrowded. They might have questioned where all the clients were to come from in an impoverished world. They might even have asked themselves whether the stream of banks, insurance offices, and cinemas requiring new and palatial premises was not soon likely to cease. To answer questions like those, he thought they must have recourse to first principles, and say that so long as their people as a people retained their energy and their enterprise, so long would there be a demand for accommodation and housing for their activities, which were the products of their enterprise and energy.

In all the arts in recent years there were startling inventions, manifestations of unrest, and strivings after new forms of expression, crude perhaps, but arresting and provocative. Architecture had withstood those shocks probably better than any of the kindred arts, possibly on account of its concrete and permanent character. Students should not treat such examples as totally unworthy of study, nor shut them out from their minds either on account of simplicity, novelty, or break from tradition. It was a great and fatal mistake to allow the arteries of the mind to harden. They should keep an open and responsible spirit and they would be rewarded.

Following is the list of prize-winners :

Diplomas : James B. Cairns, Robert A. Collie, John W. MacDonald, David S. Paterson, Lennox D. Paterson, James W. C. Wingate. Certificates: Archibald M. Duncan, Robert Rennie.

Glasgow Institute of Architects' Prizes : (Design) David G. MacConville; (measured drawings) Sydney E. Manchester; (freehand drawing), William J. Fairweather.

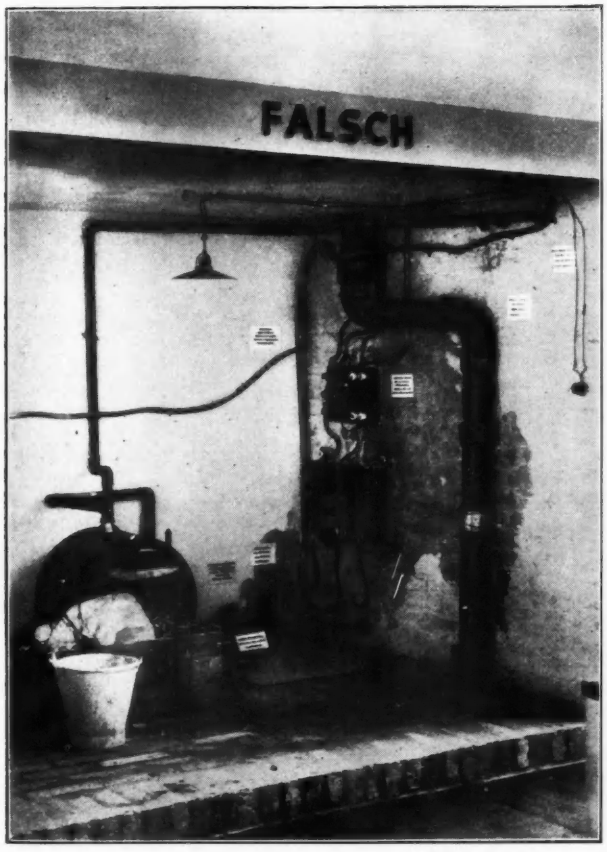
J. B. Wilson Prize : William A. Jack.

T. L. Watson Memorial Prize and Professor C. Gourlay Memorial Prize : William J. Fairweather.

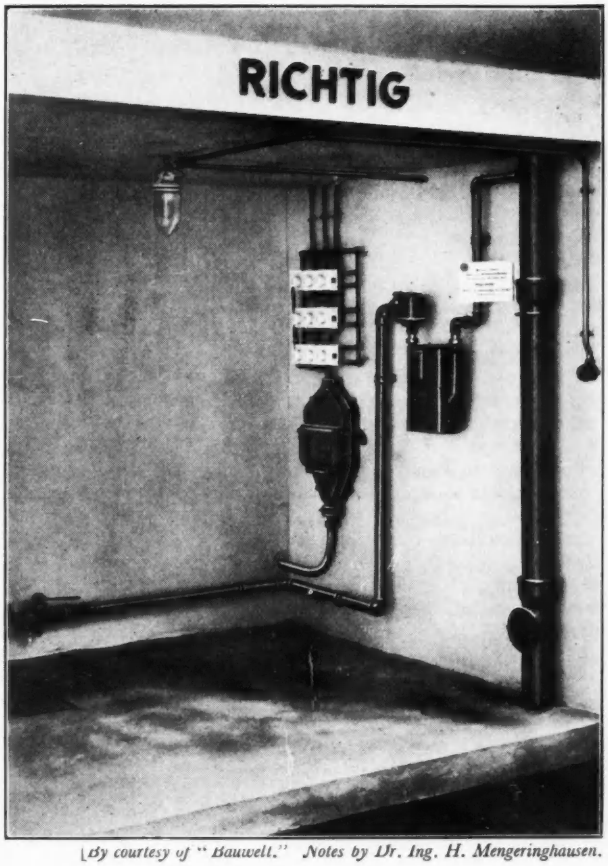
The A. L. Hamilton Memorial Studentship (£30) and Medal and The Bourdon Memorial Studentship (£35) : David S. Paterson.

Minor travelling bursaries of £10 each : Thomas W. Kennedy and Ronald M. W. Young.

ORDER AND DISORDER IN THE CELLAR



Disorder in the cellar. The pipes and conduits are run without regard for one another : they cross; the lead service water-pipes show bad plumbing and defective fixing; the union to the old-fashioned wet gas-meter is untidy and inefficient; the waste-water pipe is badly arranged and insufficiently caulked (hence the damp wall) and has no cleaning plug; the electricity junction box is antiquated and corroded from oxidation, etc. ; the fixing cleats are patched up and the lead-in conduits do not comply with the regulations (i.e. not attached to porcelain insulators).



[By courtesy of "Bauwelt." Notes by Dr. Ing. H. Mengeringhausen.

Order in the cellar. Here all the same services are shown laid out on a plan, prepared before building was begun, so that no crossings of pipes will occur; water supply, gas supply and drain are laid in a common pipe-duct and led through prearranged openings left in the walls at the time of building; at these wall crossings and at other vulnerable places various means are taken to prevent corrosion occurring; a high-efficiency gas-meter; lighting conduits answering to the before-mentioned insulation requirements, a lamp with enclosed glass shield, etc., are installed.

LAW REPORTS

INJUNCTION AGAINST DEMOLITION

Simmons v. *Warwick. Chancery Division. Before Mr. Justice Luxmore*

AN interesting point as to the right of a landlord to carry out alterations to premises was raised in the claim brought by Mr. G. Simmons, carrying on business at 79 Queen's Road, Bayswater, as the Universal Estate Agency, against Mr. T. Warwick, of Hyde Park Square, for an injunction restraining the defendant from entering upon and partially demolishing premises of which plaintiff is the tenant under the defendant.

Mr. Gallop, for the plaintiff, said his client in September, 1927, by agreement took for a period of seven years at a rental of £110 per annum, two rooms and a lock-up shop from a Mr. Olivieri, at 79 Queen's Road. In 1929 Mr. Olivieri assigned his interest in the premises to the present defendant. Plaintiff's case was that later the defendant desired to carry out certain alterations to the front of the premises so as to give better access to the back of the premises, which were used as a dancing club. Though there were negotiations, counsel said no concluded agreement resulted, and his client now alleged that in 1931 the defendant threatened to demolish part of defendant's premises and to carry out the alterations without his client's consent.

Mr. Robert Fortune, for the defendant, said his client alleged that early in 1931 it was agreed between the plaintiff and the defendant that the entrance to the premises should be improved, a condition being that the plaintiff should have a showcase on each front of the entrance angle. In addition, it was a term that the plaintiff should receive £1 a day as compensation for each day that he was deprived of his display owing to the work to be carried out. Under these circumstances the defendant commenced the work. Counsel submitted that the plaintiff was now estopped from obtaining relief, having regard to the agreement he had entered into.

Mr. Gallop said many matters were discussed between the parties, including the proposed payment of £1 a day as his learned friend had stated, but all those negotiations completely broke down.

JUDGMENT

His lordship, after hearing the evidence, gave judgment for the plaintiff, granting him an injunction and ordering the defendant to pay the costs. His lordship said he had come to the conclusion that in this case there was no concluded agreement by the plaintiff for the rearrangement of the premises. The defendant, in his opinion, was wrong in threatening to carry out the work against the wish of the plaintiff, and therefore the plaintiff was entitled to prevent interference with the property he held under his agreement.

BUILDERS' APPEAL ON GAS FUMES DEATHS : APPEAL ALLOWED

Bottomley and Another v. *Bannister and Another. Court of Appeal. Before Lords Justices Scrutton, Greer and Romer*

The Court delivered its reserved judgment in the appeal by Messrs. G. W. Bannister and Walter Harris, builders, of Moyser Road, Streatham, from the verdict and judgment in an action tried by Mr. Justice Hawke and a jury in April last, arising out of the death of Mr. Charles Henry Bottomley and his wife Enid, in the bathroom of a house where they were living at Denmark Road, Carshalton, on October 26, 1929, from carbon monoxide fumes, which were alleged to have come from a gas boiler in the kitchenette, which did not have a flue.

The plaintiffs in the action and the respondents to the appeal were Mr. J. H. Bottomley, of The Wrythe, Carshalton, and his co-administrator, Mr. C. E. Wilson, and they had sued Messrs. Bannister and Harris on behalf of the infant daughter of the late Mr. and Mrs. Bottomley, and recovered a verdict for £1,700 damages against them.

Mr. Justice Hawke, after legal arguments, entered judgment for plaintiffs for the amount awarded by the jury.

The grounds of the appeal were that on the facts judgment should have been given for defendants, and that there was a misdirection both as to law and the facts. It appeared that in 1929 the appellants were developing an estate in the Denmark Road area, and the late Mr. Bottomley, who was then parliamentary agent for Sir Alfred Butt, called upon Messrs. Bannister and Harris with reference to purchasing a house on the estate. In September, 1929, an agreement was entered into and Mr. Bottomley and his wife took possession. On October 26, two days before the contract for purchase was due to be completed, they were both found dead in the bathroom. The house was fitted with a gas boiler in the kitchenette, where there was also a linen shoot leading up to the bathroom. It was supposed that the fumes went up the shoot and into the bathroom and caused the death of Mr. and Mrs. Bottomley.

The case for the plaintiffs was that the builders were negligent in fitting the boiler without a flue, and also negligent in making a linen shoot which opened into the bathroom.

The defendants, the builders, denied that they had failed or neglected to complete the house in a workmanlike manner. They denied that the boiler was negligently installed, or that the various products of combustion were emitted directly into the house or at all. One of the features of the design of all the houses built by the defendants was that hot water for the bath and sink was provided by a boiler heated by a Bunsen gas burner, with no flue to carry off waste products. It was in evidence that some 15,000 of these boilers had been sold. It was also proved that the Aerated Bread Co. used over 500 of the boilers in the kitchens of their various shops, that that company selected them because they needed no flues, that no difficulty had occurred with them, and that they were still being fixed at the date of the trial.

For the respondents it was argued that liability on the part of the builders arose apart from any contract, and that the landlord was responsible for dangers he had created on the premises.

JUDGMENT

Lord Justice Scrutton, in giving judgment, said the case raised difficult points of law, and the questions left to the jury did not make the legal questions any easier. It had been stated that 15,000 of the boilers had been sold, and it was established that such an installation, properly regulated, was not dangerous; that the defendants had nothing to do with the regulating; and that as the alternation of the needle in the boiler was done by the occupier or his wife, the defendants could not be held liable.

There was no evidence on which the jury could find that when the needle of the boiler was in proper position the house was not fit for habitation. In his view the judgment in the Court below should be set aside and judgment entered for the defendants. He could understand that the jury might have sympathized with the child, but their sympathy must not be allowed to do an injustice to the defendants. The judgment in the Court below would be set aside and judgment entered for the defendants, Mr. Bannister and Mr. Harris.

Lords Justices Greer and Romer concurred, and judgment was entered for the defendants, with costs.

The £1,700 paid into court was ordered to be paid out to the defendants.

IMPROVEMENT SCHEME—HOUSING ACT

Vauxhall Estates, Ltd. v. *Liverpool Corporation. King's Bench Divisional Court. Before Justices Avory, Humphreys and Macnaghten*

This case raised a point in regard to land acquired compulsorily by the Liverpool Corporation for an improvement scheme, and came before the Court on an appeal in a special case stated by an arbitrator, following an award in a dispute between the Vauxhall Estates, Ltd., and the Corporation, under the Acquisition of Land (Assessment of Compensation) Act, 1919.

It appeared that the Corporation, acting under powers conferred upon them by the Housing Act, 1925, had dealt with certain "unhealthy areas" in Liverpool and, having devised a scheme for the improvement of those areas, had acquired land with a view to carrying out that scheme. A dispute arose as to the amount of compensation payable to the owners, and the arbitrator had arrived at alternative amounts. The question before the Court was which of two Acts of Parliament prevailed in regard to the payment of compensation. The Housing Act, 1925, provided a special and narrower basis of compensation, assessing it on the value of the site clear of the buildings, while the earlier Acquisition of Land Act, 1919, allowed compensation for land with the buildings on it.

Mr. R. A. Hill, for the Vauxhall Estates, Ltd., said he relied on certain words in section 7 of the Act of 1919, which set out that if any section in the Housing Act was inconsistent with the provisions of the Acquisition of Land Act, 1919, then that section should cease to have any effect. He rested his case on the statement in the section that it should cease to have any effect. His submission was that here section 46 of the Housing Act had no effect, as it was clear that it provided for compensation on an entirely different basis from that provided for under the Acquisition of Land Act, section 2.

Mr. Montgomery, K.C., for the Corporation, said his case was that the Act of 1925 impliedly repealed the section of the Acquisition of Land Act relied upon by his learned friend. In his opinion section 2 of the Acquisition of Land Act was repugnant on the ground that it sought to bind the hands of Parliament with regard to later legislation, and further, that it only dealt with Acts that preceded it.

The Court dismissed the appeal with costs, and it was stated that the decision affected a number of other cases which centred around the same improvement scheme in Liverpool.

Mr. Justice Avory, in giving judgment, after reviewing the facts of the case, said the Court was asked to hold that in 1919, by an Act of that year, the hands of Parliament were tied in such a way that it could not, by any subsequent Act, enact something that was inconsistent with the provisions of the 1919 Act. In his view such a contention was not consistent with the legal constitution of this country. It must be borne in mind that before the passing of the Acquisition of Land Act, 1919, there had been passed a Housing Act, and in section 9 of that Act there were provisions with regard to compensation that were re-enacted in the 1925 Act in section 46. He therefore came to the conclusion that the answer to the question they were asked in the case was that compensation must be assessed on the basis of the Housing Act, 1925, section 46, as a site clear of buildings and available for development within the requirements of the Corporation's bylaws and subject to the reduction factor provided by the section. The appeal would therefore be dismissed with costs.

Justices Humphreys and Macnaghten agreed.

COMPETITIONS OPEN

December 31.—Sending-in day. Latest date for conditions was September 30. Proposed New Town Hall and Municipal Buildings, for the Walthamstow Corporation. Assessor: H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions were obtainable from F. C. Gardner, Town Clerk, Town Hall, Walthamstow, E.17. (Deposit, £3 3s.)

January 1, 1932.—Sending-in day. Proposed Church at Low Shiregreen, Sheffield, in connection with the Bishop of Sheffield's 100,000 guineas appeal (limited to architects with an office in the Sheffield Diocese). Assessor: C. C. Thompson, F.R.I.B.A. Full particulars obtainable from the Hon. Secretary, Sheffield, South Yorkshire and District Society of Architects and Surveyors, 15 St. James' Row, Sheffield.

March 1, 1932.—Sending-in day. Proposed new Municipal Offices and Police Station on a site fronting St. Peter Street, Bethel Street and St. Giles Street, Norwich. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: 1st, £500; and for the next three designs £700 will be divided according to merit at the Assessor's discretion. Conditions, etc., obtainable from Noel B. Rudd, Town Clerk, Guildhall, Norwich. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions was August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

September 31, 1932.—Sending-in day. All-British House (cost: £1,000 or less) for the Incorporated Association of Architects and Surveyors. Premiums: 50 guineas, 20 guineas and 10 guineas. Conditions, etc., from the Secretary, I.A.A.S., 1 Wilbraham Place, S.W.1.

THE ARCHITECTS' DIARY

WEDNESDAY, DECEMBER 30

R.I.B.A., 9 Conduit Street, W.1. Second of three Christmas holiday lectures for boys and girls. "Mediæval and Renaissance Houses." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

FRIDAY, JANUARY 1, 1932

R.I.B.A., 9 Conduit Street, W.1. Last of three Christmas holiday lectures for boys and girls. "Houses of the Moderns." By E. R. Jarrett, A.R.I.B.A. **3.30 p.m.**

SATURDAY, JANUARY 2

Sunrise, 8.6 a.m. Sunset, 4.2 p.m.

MONDAY, JANUARY 4

R.I.B.A., 9 Conduit Street, W.1. Award of prizes and studentships. Criticism by E. Berry Webber, A.R.I.B.A., on work submitted. **8 p.m.**

WEDNESDAY, JANUARY 6

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "German Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 7

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. "The Future of Domestic Decoration." By C. O. Masters.

SATURDAY, JANUARY 9

Sunrise, 8.4 a.m. Sunset, 4.10 p.m.

MONDAY, JANUARY 11

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The A.A. Excursion to Austria, 1931." By Grahame B. Tubbs, A.R.I.B.A. Also exhibition of photographs of buildings visited on the excursion. Until January 22. **8 p.m.**

WEDNESDAY, JANUARY 13

MANCHESTER SOCIETY OF ARCHITECTURE. "Rational Architecture." By Joseph Emberton, F.R.I.B.A. **6.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Housing on the Continent." By L. H. Keay, F.R.I.B.A. **6 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Belgian and Dutch Renaissance." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 14

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, JANUARY 15

HASTINGS MUNICIPAL SCHOOL OF ART LECTURES ON ARCHITECTURE. "Renaissance and Reformation." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, JANUARY 16

Sunrise, 8.0 a.m. Sunset, 4.20 p.m.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Visit (afternoon) to the Tower of London.

MONDAY, JANUARY 18

R.I.B.A., 9 Conduit Street, W.1. President's address to students and presentation of medals and prizes, 1931. **8 p.m.**

WEDNESDAY, JANUARY 20

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Spanish Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

THURSDAY, JANUARY 21

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. 'Fourteenth-Century Architecture." By Herbert Mansford. **7.30 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Competitions." By Percy E. Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

THANET SCHOOL OF ART LECTURES ON ARCHITECTURE. At Chatham House School, Ramsgate. "Awakening of Florence." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, JANUARY 22

HASTINGS SCHOOL OF ART LECTURES ON ARCHITECTURE. "Awakening of Florence." By R. Goulburn Lovell, A.R.I.B.A. **7.30 p.m.**

SATURDAY, JANUARY 23

Sunrise, 7.53 a.m. Sunset, 4.31 p.m.

MONDAY, JANUARY 25

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "A Layman's Evening." Speakers: Lionel Smith-Gordon, A. P. Herbert and E. V. Lucas. **8 p.m.**

TUESDAY, JANUARY 26

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Housing Acts, 1928–30." By Leslie Maddock. **7 p.m.**

WEDNESDAY, JANUARY 27

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Renaissance (1500–1900)." By Sir Banister Fletcher, PP.R.I.B.A. **6 p.m.**

BRITISH WOOD PRESERVING ASSOCIATION. At the Auctioneers' and Estate Agents' Institute, 29 Lincoln's Inn Fields, W.C.2. "Diseases of Timber." E. St. G. Cartwright. **6 p.m.**

TRADE NOTES

Surrounding the stand of the Silicate Paint Co. (J. B. Orr & Co., Ltd.), at the Newcastle Exhibition of the National Federation of Master Painters and Decorators, was a series of fifteen decorated panels, each carried out by craftsmen and lady artists who had entered for the Duresco prize competition, which is organized by the Silicate Paint Co., every two years, partly with the object of fostering the advance of decorative art, and also to show the very practical and beautiful colour effects which can be obtained by the sole use of Duresco. There were over eighty entries for the competition.

The five prize-winners are as follows :

First Prize : Six Guineas. J. Wilson, Decorative Artist, Marley Cottage, Marley Avenue, New Milton, Hants.

Second Prize : Four Guineas. H. Mawdsley, Decorator, Sandbank, 32 Botoner Road, Coventry.

Third Prize : Three Guineas. H. Butler, Artist, 18 Carmalt Gardens, London, S.W.

Fourth Prize : Two Guineas. Miss Margaret Linnell, Artist, "Arnwood," Trinity Lane, Waltham Cross.

Fifth Prize : One Guinea. Miss Kathleen M. Linnell, Artist. "Arnwood," Trinity Lane, Waltham Cross.

Highly commended by the judges : Messrs. W. Simpson, F. L. Walker, A. G. Griffin, M. S. Outwin, C. R. Lee, W. Sleath, S. C. Heward, P. Egan, H. Roberts, and F. Marshall.

*

The new patented tubular waterway back section which is fitted to Messrs. Lumbys, Ltd., new "B" series of solar cast sectional central heating boilers, is claimed to be a definite improvement on the ordinary type of sectional boilers, where the back section has hitherto been regarded as its weakest part.

The new construction, as will be seen from the illustration on this page, eliminates the necessity of stays in the back section. It is interesting to note that one of the small-size sections, tested to destruction, resisted a hydraulic pressure of 300 lb. before fracture. The conservative rating of 4,400 B.T.U. per square foot of heating surface, together with the larger firebox capacity, gives, it is stated, an output for six hours at the full rated duty of the boiler. Among the advantages claimed are the following : Increased fuel capacity, extra deep waterway over fire, longer burning, and twelve hours with one charge of fuel.

*

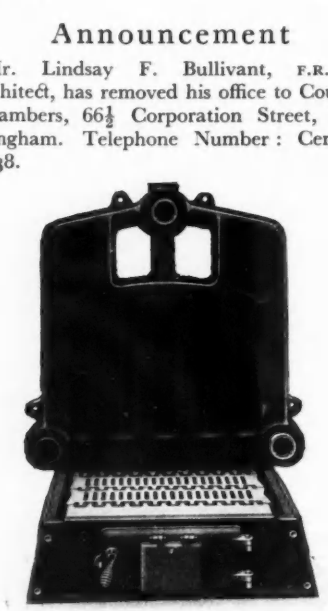
In order to correct the prevalent but erroneous impression that stainless steel requires no attention once it has been installed, Messrs. E. Pollard & Co., Ltd., of St. John Street, E.C.1, have issued a leaflet entitled *The Care and Maintenance of Steel*. It is stated that in an exceptionally dirty locality, in the presence of considerable smoke, soot and fumes, it is necessary to clean the steel more often than under less severe conditions, and accessibility for cleaning becomes of very great importance. In towns, stainless steel should be washed down every week or ten days to give the clean appearance needed. The following simple method for cleansing is advocated by the firm : "Wipe over the surface with a damp cloth or leather, using a little soap and warm water if necessary. A scrubbing brush is useful for reaching corners and crevices. The steel should be dried and polished with a soft dry cloth or leather. Coarse fabrics, grit and metal polish should be avoided, as liable to scratch the polished surfaces."

*

Messrs. W. T. Henley's Telegraph Works Co., Ltd., of Holborn Viaduct, E.C.1, have just issued a new booklet describing their three wiring systems, entitled *For Complete Installations or Extensions*. Designed in its entirety by the firm's advertising staff, the booklet also contains numerous coloured illustrations of important buildings, both at home and abroad, which have been installed with Henley's wiring systems. The three systems—the Henley wiring system, the Henley "Nomet" wiring system, and the Henley "Bondit" wiring system, patent 236786—enable, it is stated, the electrical contractor to carry out a neat surface installation without disfiguring such features as picture rails, door architraves and other structural and decorative features. No matter how irregular the contour, the wires can be so installed as to take advantage of it, being made to lie flat and fit snugly. These systems are, it is claimed, as suitable for alterations or extensions to existing installations as for complete installations.

Announcement

Mr. Lindsay F. Bullivant, F.R.S.A., architect, has removed his office to County Chambers, 66½ Corporation Street, Birmingham. Telephone Number : Central 1738.



The tubular waterway back section for central heating boilers. See note on this page.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

The Richmond Hotel, Richmond Place, Brighton (pages 856–9). General contractors, Rice and Son, Ltd. Sub-contractors : G. Asserati, Ltd., asphalt and terrazzo flooring and staircase; Dorking Brick Co., Ltd., bricks; J. Rooke and Son, Ltd., Clipsham stone; A. E. Watson & Co., structural steel; Ames and Finnis, tiles; Cox and Barnard, leaded lights; The London Sand Blast Decorative Works, Ltd., special peach-coloured mirrors; The British Challenge Glazing Co., Ltd., skylights; Haywards, Ltd., pavement lights; Korkoid Decorative Floors, Korkoid flooring; W. H. Fellingham and Sons, Ltd., central heating and boilers; J. J. G. Saunders and Sons, stoves, grates, mantels and sanitary fittings; The Brighton, Hove and Worthing Gas Co., gas fixtures and gas-fitting; Ralph Garrett, electric wiring, light fixtures and heating, bells and telephones; Parker, Winder and Achurch, Ltd., door and window furniture; Crittall Manufacturing Co., Ltd., metal casements; James Walker (Architectural Decorations), Ltd., decorative plaster; "Ye Olde Forge," iron grilles to fanlights; W. Saunders and Son, iron balustrade to stairs; R. G. C. Panels, Ltd., walnut panelling (remainder by General Contractors); J. Rooke and Son, Ltd., stonework; F. W. Giebeler, service lifts; Arthur Lyon & Co., special clock in saloon; Franco-Neon Signs, Ltd., Neon sign ; The Birmingham Guild, Ltd., bronze and blue enamel lettering; Gaskell and Chambers, Ltd., beer engines.

Shops and Flats, Woodlands Park Estate, near Bournville, Birmingham (page 860). General contractor, P. Cox. Sub-contractors : Blockleys, Ltd., facing bricks; D. Wiseman, Ltd., plumbers' work; Co-operative Wholesale Society, Ltd., fitting-up of the grocery shop, including the shop fronts; Ten Acres Society's Works Department, fitting-up of the greengrocery shop and the butchery; Parker, Winder and Achurch, Ltd., ironmongery and grates; T. Glover, electric lighting and power.

St. Anne's Church, Blackburn (page 863). General contractors, Messrs. Cronshaw, Woof, Ltd. Sub-contractors : The Stratford - upon - Avon Guild, stained glass windows; Jos. F. Ebner, wood block floors ; Leyland and Birmingham Rubber Co., Ltd., rubber flooring; Boulton, Ltd., marble work; W. H. Fraley and Sons, marble columns.

Douglas Haig Homes, Penzance (pages 864–5). General contractor, W. H. Trounson and Son. Sub - contractors : Shanks & Co., Ltd., sanitary fittings; Treseder & Co., gardens.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BERMONDSEY B.C. has prepared a scheme for the development of a site in the Odessa Street and Elgar Street area, providing for the erection of 193 flats and 12 shops.

Plans passed by the BERMONDSEY B.C. : Buildings, Mark Brown's wharf, Potters Fields, for Proprietors of Hay's Wharf; shop, 24 Lower Road, for Mr. R. E. Bustin; boiler house, Alaska Works, Grange Road, for Messrs. Wallis, Gilbert and Partners; boiler house, Kirby's Refineries, Clack Street, for Messrs. Geo. Green (Beckenham), Ltd.

The CROYDON Corporation is to erect flats in Windmill Street, at a cost of £5,115.

Plans passed by the CROYDON Corporation : Shops, offices and flats, 341–3 Purley Way, for Mr. A. J. Caney; two shops, London Road, for Mr. G. M. Mitchell; three houses, off Haling Park Road, for Messrs. G. and C. A. Parris; hall, Manor Road, for Mr. S. A. Bull; five houses, Midhurst Avenue, for Mrs. B. Calcot; alterations and additions, "Crown and Sceptre" public-house, Junction Road, for Mr. C. R. Riches; alterations and additions, 42–4 North End, for Messrs. Boots, Ltd.

A block of flats is to be built on the Border Crescent Estate, CRYSTAL PALACE, from the designs of Mr. G. Alan Fortescue, A.R.I.B.A.

Five houses are to be built on the Border Crescent Estate, CRYSTAL PALACE, from the designs of Mr. G. Alan Fortescue, A.R.I.B.A.

Plans passed by the EAST HAM Corporation : Three houses, Rectory Road, and 8 houses, Market Place, for Mr. J. H. Lohden; alterations, 245 High Road North, for Messrs. Parnall and Sons, Ltd.; rebuilding the "Roman Urn" public-house, Roman Road, for Mr. S. A. S. Yeo; stores for Austins, Ltd., Barking Road, for Mr. R. Slater; four houses, Tyronne Road, for Mr. H. Joseph.

Plans passed by the FRIERN BARNET U.D.C. : House, Friary Road, for Mr. C. Cooper; schoolroom, Oakleigh Road, for Whetstone Congregational Trustees; house, Friary Road, for Mr. H. C. Hitchmen; house, Temple Avenue, for Messrs. Auburn and Sons.

Plans passed by the FULHAM B.C. : Alterations and extensions to flats, Hurlingham Court, for London County Freehold and Leasehold Properties, Ltd.; new buildings, 298, 300–2 North End Road, for Mr. A. E. Batzer; extensions, 42 Vereker Road, for Messrs. W. J. Marston and Son; additions, 2 Stonor Road, for L. F. Smith West London Property Co.

Messrs. Morris Estates, Ltd., are to erect buildings in Finchley Road, Barrand Street, and Ingham Street, HAMPSTEAD.

Mr. H. J. Janes had purchased land in Danehurst Gardens, ILFORD, for the erection of fifteen houses.

Mr. A. W. Jaggers is to erect a sweets factory in Dane Road, ILFORD.

Messrs. Suburban Developments, Ltd., are to erect shops in Victoria Parade, Cranbrook Road, ILFORD.

Plans passed by the ILFORD Corporation : Nine shops and houses, Clarence Terrace; six shops and houses, Lington Terrace, and two houses, Roy Gardens, for Mr. G. F. Siegerts; factory buildings for B.I.M., Ltd., Roden Road, for Mr. Henry Potter; additions, Ilford Steam Laundry, Ley Street, for Messrs. B.Bailey & Co.; public house, Chadwell Heath Lane, and sixty-four houses, Oak Drive, for Mr. E. Meredith; boiler and engine house, Uphall Road, for Messrs. Howards and Sons, Ltd.; two houses, Danehurst Gardens, for Mr. J. Moon; additions, 23–5 Clements Road; and five houses, Youngs Road, for Messrs. Haines and Warwick, Ltd.; forty houses, Vista Drive, for Messrs. P. G. Ashton and Sons; coach works, Cranbrook Road, shop and two houses Redbridge Lane, house, Sunnymede Drive, twelve houses, Ridgway Gardens, seven houses, Valentines Road, and fifty-six houses, Queensborough Gardens, for Mr. T. Anders; eighteen houses, Glenwood Gardens, for Mr. F. M. Smith; fifteen houses, Danehurst Gardens, for Mr. H. J. Hains; seven houses, Campbell Avenue, for Mr. W. Wakeling; three houses, Bel Royal Gardens, for Mr. F. S. Russell; two houses, Danehurst Gardens, for Mr. T. J. S. Blake; twenty houses, Highwood Gardens, for Mr. A. Smith; four shops and houses, Eastern Avenue, for Seymour Construction Co., Ltd.; rebuilding warehouses, etc., Havelock Street, for Harrison Gibsons, Ltd.; nine houses, Fernhall Drive, for Messrs. Matthews and Goodman; three houses, Southdene Gardens, for Mr. J. Aldridge; ten houses, Roxy Avenue, for Mr. F. Stimpson; fifteen houses, South Park Drive, for Mr. W. M. Edwards; three houses, Westrow Gardens, for Messrs. J. W. Moore and Sons; workshops, Albert Road, for Messrs. H. T. Loxley, Ltd.; two bungalows, Oak Lane, for Mr. R. W. King; three houses, Donaldson Gardens, for Mr. H. G. Needham.

Plans passed by the LEWISHAM B.C. : Eight houses, Bankhurst Road, for Highfield Estate Co.; garage and workshop, Castlands Road, for Mr. D. T. Walters; rebuilding, 65–7 High Street, for Mr. S. W. Ackroyd; additions, Forbanks Sports Pavilion, for Messrs. Holland & Hannen and Cubitts, Ltd.; shelters and balconies at proposed cinema, Loampit Vale, for Mr. W. E. Trent; development of Northbrook estate, Lee, for Messrs. Farebrother, Ellis & Co.

Plans passed by the POPLAR B.C. : Presbytery, St. Mary's Church, Canton Street, for Mr. W. C. Morgan; additions, 297 West Ferry Road, for Mr. W. Figg; additions, "Ancient Briton" public-house, Glaucus Street, and additions, "Sun and Sawyer" public-house, High Street, for Mr. S. A. S. Yeo; additions, 22 Bow Road, for Messrs. F. Payne and Son; additions, "Addington Arms" public-house, Addington Road, for Mr. C. J. Bailey.

The POPLAR B.C. has prepared a revised scheme for the erection, by direct labour, of flats and cottages on the East Ferry Road site, at a cost of £33,370.

Messrs. Cluttons are to erect two blocks of tenements in Causton Street and Regency Street, WESTMINSTER.

Plans passed by the WESTMINSTER City Council : Rebuilding 24 Old Bond Street, for Mr. E. Vincent Harris; shelter, Comedy Theatre, Panton Street, for Messrs. B. Cohen and Sons, Ltd.; shop, 20 Victoria Street, for Messrs. T. Tilling, Ltd.; building for Duchy of Lancaster, Lancaster Place, for Messrs. W. & E. Hunt.

NORTHERN COUNTIES

The CARLISLE Corporation is to erect sixty-four houses for aged people at Old Greystone.

Plans passed by the CARLISLE Corporation : Twelve houses, London Road, for Messrs. Benwell and Slack; two houses, Belah Crescent, for Messrs. W. H. Reeves and Sons; shop, Scalegate Road, for Mr. R. P. Blackburn; four houses, Holme Head Road, for Mr. H. Foxall; auction and showrooms, Scotch Street, for Messrs. Vasey and Sons; alterations, Conservative Club, Nelson Street, for Mr. H. E. Scarborough; bungalow, York Place, for Mr. R. Hilton.

Mr. J. W. Bailey has purchased sites for the erection of shops on the Herringthorpe housing estate, ROTHERHAM.

The ROTHERHAM Corporation has purchased fifty-three acres of land in Fitzwilliam Road, for a housing scheme.

The Wakefield Corporation is considering the advisability of proceeding with part of the £45,000 scheme for the proposed joint infectious diseases hospital at SNAPETHORPE.

Plans passed by the STRETFORD U.D.C. : Four houses and shop, Railway Road, for Messrs. Archer and McAlpin; extensions, Thord Avenue, for Messrs. Collars, Ltd.; extensions, Ashburton Road, for Messrs. J. Laing, Son & Co., Ltd.; shops, Chester Road, for Messrs. C. Stuart Murray, Ltd.

The TYNEMOUTH Corporation has deferred the proposal for the erection of a new administration block at Moor Park Hospital, but has arranged to alter and extend the institution, at a cost of £4,250.

The TYNEMOUTH Education Committee has obtained a site near Silkey's Lane for the erection of a school.

The TYNEMOUTH Corporation has agreed upon the layout of the cleared area in Liddell Street, provision being made for 446 houses.

The TYNEMOUTH Corporation has passed plans submitted by Messrs. L. J. Couves and Partners for the erection of a sub-station at Northumberland Dock, for the Tyne Improvement Commissioners.

Plans passed by the TYNEMOUTH Corporation : Twelve houses, Balkwell Lane; alterations, "Wellington" public-house, fourteen houses, Queen Alexandra Road, two bungalows, Balkwell estate and shops and houses, Heaton Terrace, for Mr. W. Stockdale; alterations, Grand Hotel, for Messrs. Marshall and Tweedy; two bungalows, The Quadrant, for Messrs. Woodall and Shepherd; alterations, offices, tram sheds, etc., John Street, for Electric Traction Co.; two houses, Preston estate, for Mr. A. Taylor; twelve houses, Balkwell Lane, for Mr. Waite; two houses, Balkwell Avenue, for Mr. W. Moore; fourteen houses, Queen Alexandra Road, for Mr. Norris; alterations, premises in Front Street, and twenty-six houses, North Chirton estate, for Messrs. F. R. N. Haswell and Son.

Plans passed by the WAKEFIELD Corporation : Additions, Lupset Club, Lupset, for Mr. W. Wrigley; four houses, Horbury Road, for Messrs. Dobson and Gighall; additions, mill premises, Tootal Street, for Messrs. Newbald and Hartley; twelve houses, Eden Avenue, for Messrs. Kay and Lunan.

Plans have been prepared for the erection of twenty-four blocks of four and eight blocks of two non-parlour houses on the Huntingdon Road estate, YORK.

WALES

Plans passed by the SWANSEA Corporation : Additions, cinema, Neath Road, Landore, for Mr. W. Hyman; two houses, Harry Street, Mossiston, for Mr. E. Evans; bungalow, Dunvant Road, for Mr. W. L. Simmons; two houses, Gower Road, Killay, for Mr. S. Davies; seven houses, Hadland Terrace, West Cross, for Mr. Geo. Symons; two houses, Lon Coed Bran, for Mr. D. Griffiths; additions, Gospel Hall, Armine Road, for trustees; four houses, Bohun Street, for Mr. J. Willis; nine houses, Baglan Street, for Mr. A. E. Wright; rebuilding, 57 Woodfield Street, for Mr. Warren Jones; two houses, Myrtle Grove, Glanmor, for Mr. J. John Pye; two houses, Bryn Newydd, for Messrs. T. and G. Spragg.

MISCELLANEOUS

Plans passed by the DOUGLAS (I.O.M.) Corporation : Villa, Colden Road, and bakehouse, Castle Hill, for Messrs. L. L. Corkill & Co.; additions, 6 Dalton Street, for Mr. J. D. Moore; stores, 7 West View, for Mr. W. T. Quine; six houses, Eastfield, for Messrs. McKibbin and Kewley; alterations, Hotel Metropole, for Mr. J. P. Smith; two bungalows, Victoria Road, for Mr. Sansom.

Plans passed by the NEWPORT (I.O.W.) Corporation : Factory, Blackhouse, for Mr. J. H. Slater; two houses, Elm Grove, for Messrs. Stratton and Millgate; bungalow, Field Place, for Mr. West; stores, joinery works, etc., Trafalgar Road, for Mr. Frank Chiverton; four bungalows, Beech Road, for Mr. Wm. Basterfield; additions, 41 South Street, for Mr. G. H. Heaton.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_3	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_3	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_3	Atherstone	Mid. Counties	1 5	1 0¾
B_3	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_3	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_3	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_3	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_3	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_3	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0¾
A_3	Bournemouth	S. Counties	1 5	1 0¾
B_3	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_3	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_3	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_3	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_3	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_3	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_3	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_3	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_3	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_3	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_3	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_3	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_3	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_3	Deal ..	S. Counties	1 3½	11¾
A_3	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_3	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¼
A_2	Droitwich	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¼
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_3	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_3	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_3	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London 12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_3	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_3	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_3	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_3	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_3	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_3	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_3	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_3	Southampton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_3	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1¼
A_3	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . . ,,	1 8
,, (Fixer) . . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . . . per ton	2 8 6
Blue Lias Lime . . . . . ,,	2 10 6
Hydrated Lime . . . . . ,,	2 16 0
Portland Cement . . . . . ,,	2 6 0
Rapid Hardening Cement . . . ,,	2 13 6
Thames Ballast . . . . . per Y.C.	8 3
¾" Crushed Ballast . . . . ,,	9 6
Building Sand . . . . . ,,	10 0
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . . ,,	2 0
3" ,, ,, ,, . . . ,,	2 3
4" ,, ,, ,, . . . ,,	3 0

MASON

	s. d.
The following d/d F.O.R at Nine Elms:	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S	1 8
,, ,, 3" . . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . . ,,	15 0 0
Westmorland green (random sizes) . per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . . ,,	10
Nails, compo . . . . lb.	4
,, copper	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . . F.C.	2 6
Birch . . . . . as 1" F.S.	9
Deal, Joiner's . . . . ,, ,,	5
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured ,, . . . ,, ,,	1 3
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . . ,, ,,	1 2
Walnut American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . . ,, ,,	1 1
Deal floorings, ¾" . . . . Sq.	1 1 0
,, 1" . . . . ,, ,,	1 3 6
,, 1¼" . . . . ,, ,,	1 5 6
,, 1½" . . . . ,, ,,	1 11 0
,, 1¾" . . . . ,, ,,	1 15 0
Deal matchings, ¾" . . . ,, ,,	16 0
,, 2" . . . . ,, ,,	17 6
,, 1" . . . . ,, ,,	1 6 0
Rough boarding, ¾" . . . ,, ,,	18 0
,, 1" . . . . ,, ,,	1 0 0
,, 1¼" . . . . ,, ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			½"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6		7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 9
,, ,, ½" . . . ,,	9 6
,, ,, ⅜" . . . ,,	9 0
,, ,, ¼" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0
,, ,, 3" . . . ,,	4" 9

	s. d.	s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 6
,, drawn pipes . . . ,,	22 0
,, soil pipe . . . ,,	25 0
,, scrap . . . ,,	11 6
Solder, plumbers' . . . lb.	11
,, fine do. . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 ft. . ,,	7½ to	1 0
,, ,, 2 . . ,,	10 ,,	1 3½
,, ,, 3 . . ,,	1 4½ ,,	1 10
,, ,, 4 . . ,,	1 11 ,,	2 4
,, ,, 6 . . ,,	2 3 ,,	2 7½
,, ,, 8 . . ,,	2 5 ,,	3 0½
,, ,, 12 . . ,,	2 10 ,,	3 3½
,, ,, 20 . . ,,	3 3½ ,,	3 9
,, ,, 45 . . ,,	3 6½ ,,	4 0½
,, ,, 65 . . ,,	3 11½ ,,	4 4
,, ,, 90 . . ,,	4 4 ,,	4 9
,, ,, 100 . . ,,	4 6 ,,	4 11
Vita glass, sheet, n/e 1 . . ,,		1 0
,, ,, ,, 2 . . ,,		1 3
,, ,, ,, over 2 . . ,,		1 9
,, ,, plate, n/e 1 ft. . ,,		1 6
,, ,, ,, 2 . . ,,		3 0
,, ,, ,, 5 . . ,,		4 0
,, ,, ,, 7 . . ,,		5 0
,, ,, ,, 15 . . ,,		6 0
,, ,, ,, over 15 . . ,,		7 6
Putty, linseed oil . . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	2 4
Boiled oil . . . . ,,	2 8
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings		17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar	Per Rod 32 0 0
,, ,, in cement	,, 34 0 0
,, Stocks in cement	,, 41 10 0
,, Blues in cement	,, 62 0 0
Extra only for circular on plan	,, 3 0 0
,, backing to masonry	,, 2 0 0
,, raising on old walls	,, 3 0 0
,, underpinning	,, 10 0 0
Fair Face and pointing internally	F.S. 3
Extra only for picked stock facings	,, 1 0
,, red brick facings	,, 1 6
,, blue brick facings	,, 1 9
,, glazed brick facings	,, 4 6
Tuck pointing	,, 10
Weather pointing	,, 4
Slate dampcourse	,, 1 0
Vertical dampcourse	,, 1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse	Y.S. 5 6
½″ Vertical dampcourse	,, 7 6
½″ paving or flat	,, 5 6
1″ paving or flat	,, 6 6
1″ × 6″ skirting	F.R. 1 0
Angle fillet	,, 2
Rounded angle	,, 2
Cesspools	Each 5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C. 1 1 6
Bath stone and do., all as last	,, 15 6
Artificial stone and do.	,, 16 6
York stone templates, fixed complete	,, 14 0
,, thresholds	,, 16 0
,, sills	,, 1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr. 4 5 0
Do., 18″ × 9″	,, 4 2 0
Do., 24″ × 12″	,, 4 12 0
Westmorland slating, laid with diminished courses	,, 6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,, 4 0 0
Do., all as last, but of machine-made tiles	,, 3 11 0
Fixing only, lead soakers	Doz. 9
Stripping old slating and clearing away	Sqr. 10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr. 2 12 0
Shuttering to sides and soffits of beams	F.S. 1 0
,, to stanchions	,, 1 0
,, to staircases	,, 2 0
Fir and fixing in wall plates, lintols, etc.	F.C. 5 0
Fir framed in floors	,, 6 9
,, ,, roofs	,, 8 3
,, ,, trusses	,, 9 0
,, ,, partitions	,, 12 0
½″ deal sawn boarding and fixing to joists	Sqr. 1 17 6
1″ ,, ,, ,, ,,	,, 2 1 6
1½″ ,, ,, ,, ,,	,, 2 7 6
3″ × 2″ fir battening for Countess slating	,, 12 6
Do. for 4″ gauge tiling	,, 16 0
Stout feather-edged tilting fillet	F.R. 6
Patent roofing felt, 1 ply	Y.S. 2 6
,, ,, ,, 2 ,,	,, 3 0
,, ,, ,, 3 ,,	,, 3 6
Stout herringbone strutting to 9″ joists	F.R. 1 0
1″ deal gutter boards and bearers	F.S. 1 4
1½″ ,, ,, ,, ,,	,, 1 8
2″ deal wrought rounded roll	F.R. 9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr. 2 15 0
1¼″ do.	,, 3 4 0
1½″ do.	,, 3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S. 1 10
1½″ do.	,, 2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½″ deal moulded sashes of average size	F.S. 2 3
2″ ,, ,, ,, ,,	,, 2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ¾″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,, 4 3
2″ ,, ,, ,,	,, 4 6
Extra only for moulded horns	Each 9
1½″ deal four-panel square, both sides, door	F.S. 2 6
2″ ,, ,, ,, ,,	,, 3 0
1½″ ,, but moulded both sides	,, 3 0
2″ ,, ,, ,, ,,	,, 3 6
4″ × 3″ deal, rebated and moulded frames	F.R 1 6
4½″ × 3½″ ,, ,, ,,	,, 2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S. 2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,, 3 0
1½″ deal moulded wall strings	,, 2 6
1½″ ,, outer strings	,, 2 9
Ends of treads and risers housed to string	Each 2 0
3″ × 2″ deal moulded handrail	F.R. 1 6
1″ × 1″ deal balusters and housing each end	Each 2 6
1½″ × 1½″ ,, ,,	,, 3 3
3″ × 3″ deal wrought framed newels	F.R. 1 6
Extra only for newel caps	Each 7 6
Do., pendants	,, 7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt. 17 0
Riveted plate or compound girders, and hoisting and fixing in position	,, 1 3 0
Do. stanchions with riveted caps and bases and do.	,, 1 2 0
Mild steel bar reinforcement, ¼″ and up, bent and fixed complete	,, 1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S. 1 0
Wrot-iron caulked and cambered chimney bars	Per cwt. 1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters	Per cwt. 1 18 0
Do. in flashings	,, 2 0 6
Do. in covering to turrets, etc.	,, 2 7 6
Do. in soakers	,, 1 13 0
Labour to welted edge	F.R. 3½
Open copper nailing	,, 3½
Close ,,	,, 4½

	½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions ,,	3 6	4 0	5 6	8 0	—	—
Lead traps ,,	—	—	—	7 6	10 6	—
Screw down bib valves ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R. 1 3
Extra, only stop ends	Each 1 0
Do. angles	,, 1 6
Do. outlets	,, 3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R. 1 6
Extra, only for shoes	Each 2 6
Do. for plain heads	,, 5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh	Y.S. 3 9
Do. in n/w to beams, stanchions, etc.	,, 5 6
Lathing with sawn laths to ceilings	,, 1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,, 2 6
Do. vertical	,, 2 9
Rough render on walls	,, 2 3
Render, float and set in lime and hair	,, 3 0
Render and set in Sirapite	,, 3 3
Render, backing in cement and sand, and set in Keene's cement	,, 4 6
Extra, only if on lathing	,, 9
Keene's cement, angle and arris	F.R. 8
Arris	,, 3
Rounded angle, small	,, 3
Plain cornices in plaster, including dubbing out, per 1″ girth	,, 2
1″ granolithic pavings	Y.S. 5 0
1½″ ,, ,, ,,	,, 6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,, 1 2 6
9″ × 3″ ,, ,, ,, ,,	,, 1 7 0
Extra, only for small quadrant angle	F.R. 9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty	F.S. 8
26 oz. do. and do.	,, 1 0
Arctic glass and glazing with putty	,, 1 2
Cathedral glass and do.	,, 1 3
Glazing only, British polished plate	,, 8
Extra, only if in beads	,, 2
Washleather	F.R. 4

PAINTER

	s d.
Clearcolle and whiten ceilings	Y.S. 8
Do. and distemper walls	,, 1 0
Do. with washable distemper	,, 1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,, 3 3
Do. on woodwork	,, 3 6
Do. on steelwork	,, 3 0
Do. and brush grain and twice varnish	,, 5 6
Stain and twice varnish woodwork	,, 1 11
Stain and wax-polish woodwork	,, 4 6
French polishing	F.S. 1 2
Stripping off old paper	Piece 2 0
Hanging ordinary paper from	,, 2 9

FROM THE NEW WORLD: 10

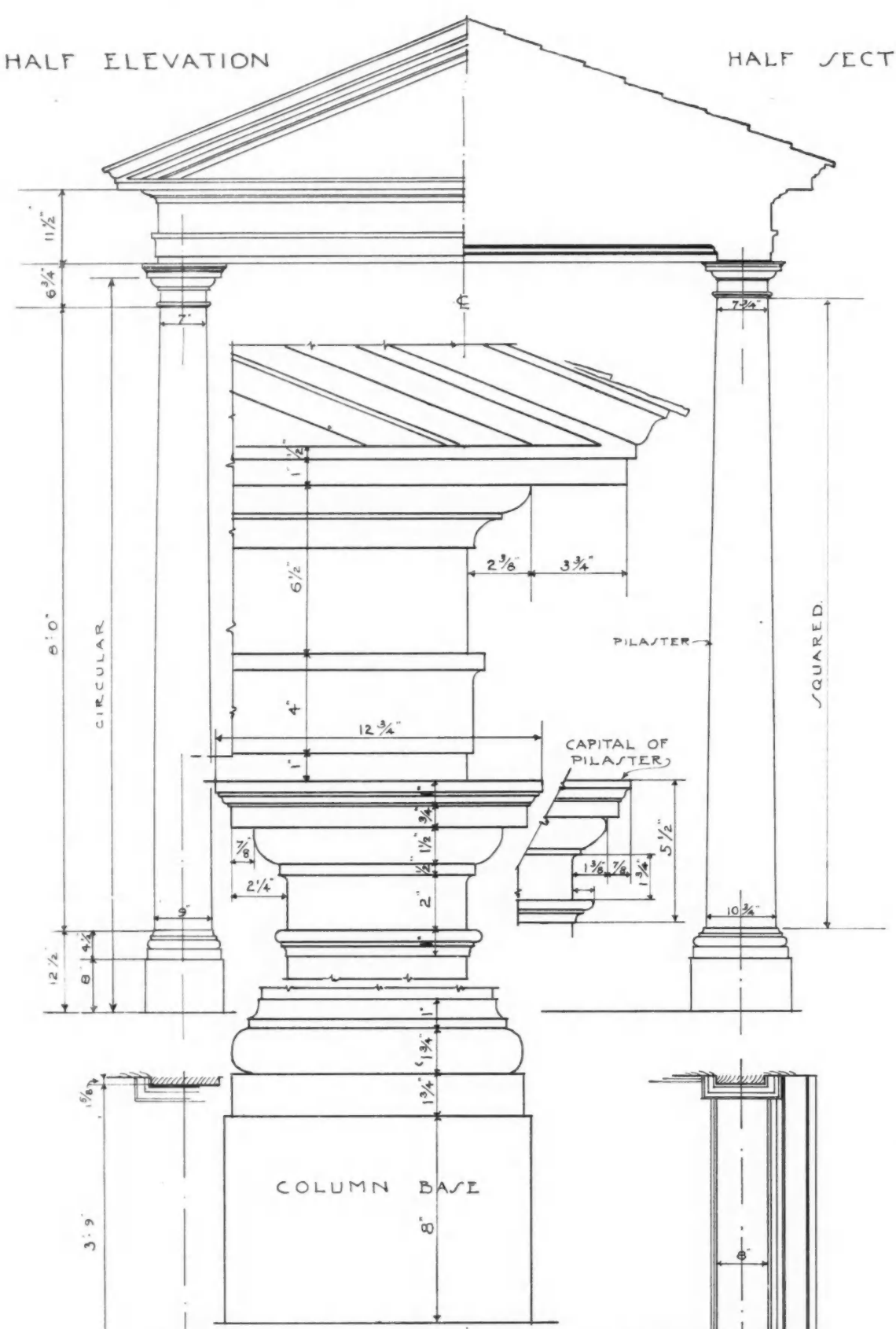
MEASURED DRAWINGS OF AMERICAN COLONIAL DETAILS

ENTRANCE PORCH AT NEWBURYPORT, MASS.

FOR this week, two entrance subjects are selected for illustration, photographically and by means of details measured and drawn by R. Keith Harris.

The interest in the simple porch of which a view appears above rests more upon its studied proportions and suitability of design, as regards material and setting, than upon any outstanding detail. In this connection, however, it is worthy of note that an air of lightness has been maintained by substituting a circular plinth to the free-standing column in place of the square one that is so universally accepted.

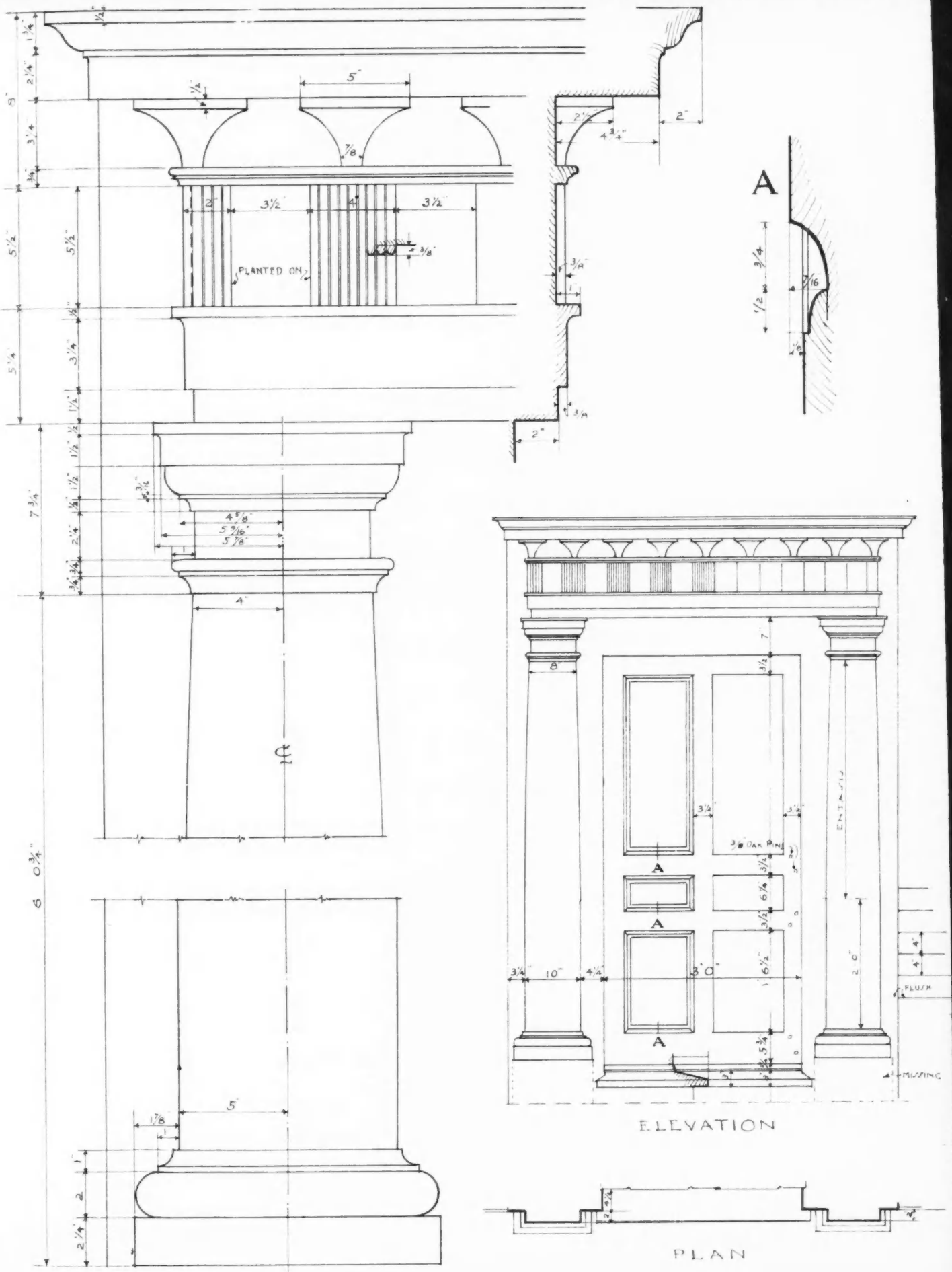
The doorway at Gloucester, shown (much dilapidated) on the last page, is an interesting example of a cottage entrance, and shows the result of simplification of classic detail. The pilasters still retain the entasis, but the entablature is treated in logical wooden fashion. The triglyph-and-metope motif is ingenuously suggested by "planting on" strips cut from a grooved board, while added enrichment is provided by similarly applying sections cut from a cavetto mould.



ENTRANCE PORCH. NEWBURYPORT. MASSACHUSETTS.

For photograph see preceding page.]

R KEITH HARRIS MEM. A. SOC. For p



OLD 'COLONIAL' DOORWAY, GLOUCESTER MASS.

For photograph see following page.]

DOORWAY AT GLOUCESTER, MASS.